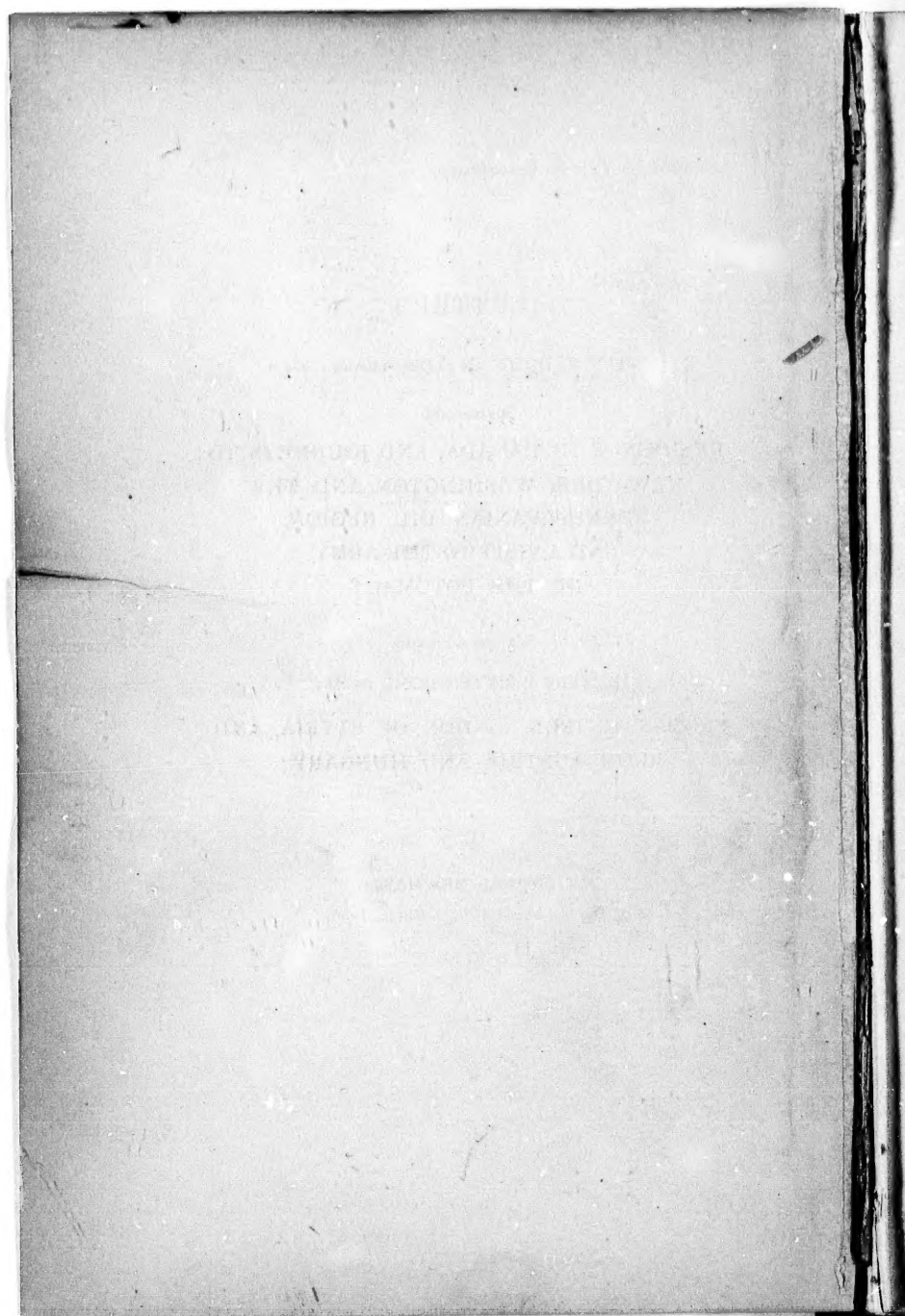








Printed for Private Circulation.

LETTERS

WRITTEN HOME IN THE YEARS 1864-5

DESCRIBING

RESIDENCE IN CANADA, AND JOURNEYS TO
NEW YORK, WASHINGTON AND THE
PENNSYLVANIAN OIL REGION,
AND A VISIT TO THE ARMY
OF THE POTOMAC ;

TO WHICH ARE ADDED

LETTERS WRITTEN HOME IN 1865,
FROM THE IRON REGION OF STYRIA, AND
FROM AUSTRIA AND HUNGARY ;

BY

WM THOMAS NEWMARCH,
A.A. OXON: GRAD. KING'S COLL., LOND:

COLLECTED AND REVISED

1880.

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THE following pages contain selections from Letters sent home by the Traveller, then a youth under twenty, in the course of the years 1864-5, during most of which he was in the office (and house) of Mr. JOSEPH HICKSON, the Secretary and now General Manager of the Grand Trunk Railway of Canada. From Canada journeys were made to various parts of the United States, where the Civil War between the North and South was then in progress; and, as will be seen, one of the expeditions arising out of these journeys was to the Army of the Potomac, in the Winter of 1864-5.

When in 1868-9, the writer became one of the original Captains of the fine regiment of Volunteer Engineers (the First Durham) raised among the 7,000 workpeople employed at Jarrow-on-Tyne, by Palmer's Ship Building Company, of which the writer was Secretary, the lessons learnt on the Potomac, in the presence of a real enemy, were found of great value.

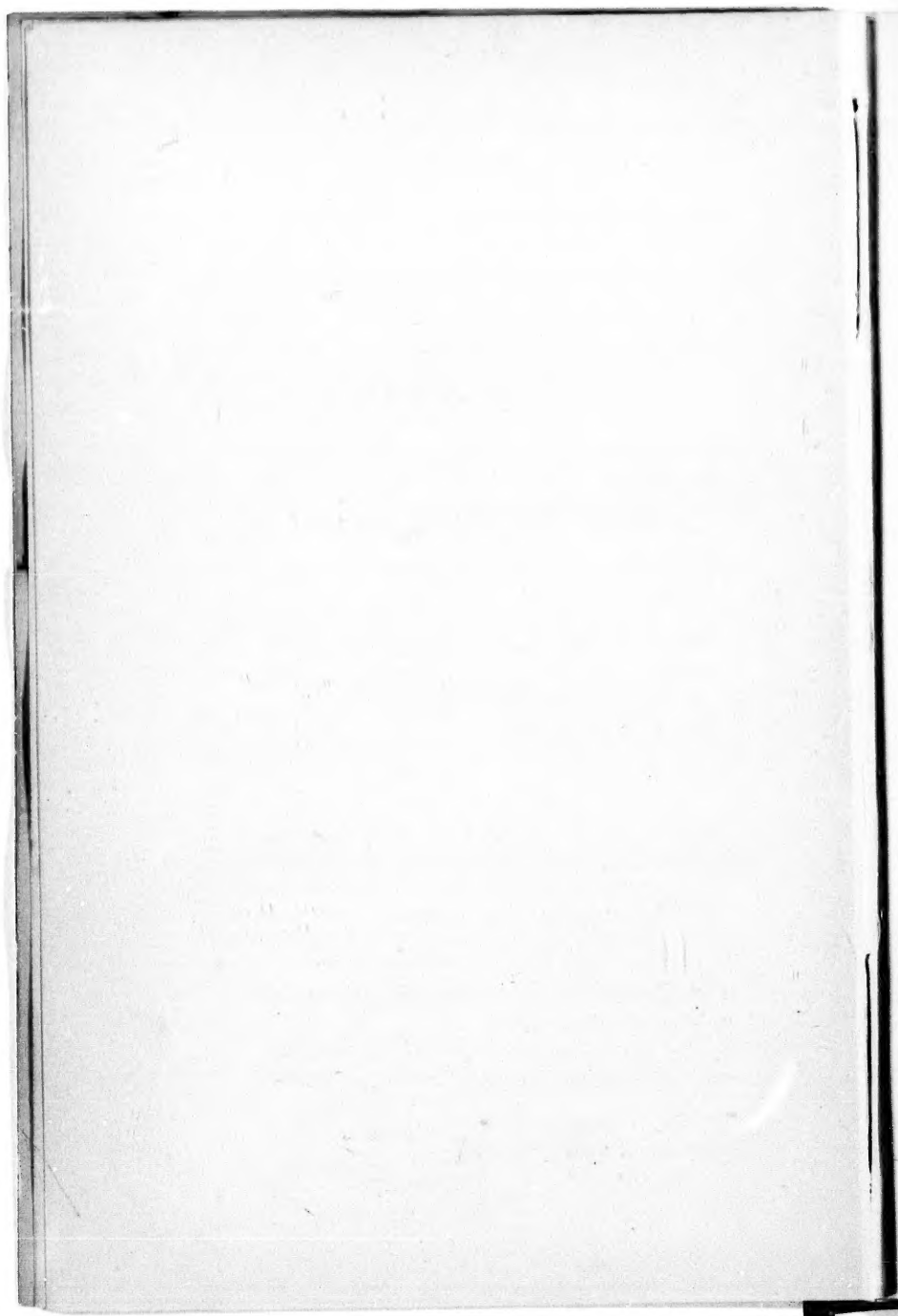
The writer cannot permit these Letters to appear without recording his deep sense of the obligations he is under to Mr. JOSEPH HICKSON, for the kindness which he as a host extended to the writer; and for the valuable example and advice which he placed before him, as a young man entering upon the active business of life in a new and foreign country.

Portions of the original letters relating only to family subjects are of course omitted.

The two Photographs preceding the title, exhibit the writer's Winter and Summer Costume in Canada.

London :

Clapham Common, Feb., 1880.



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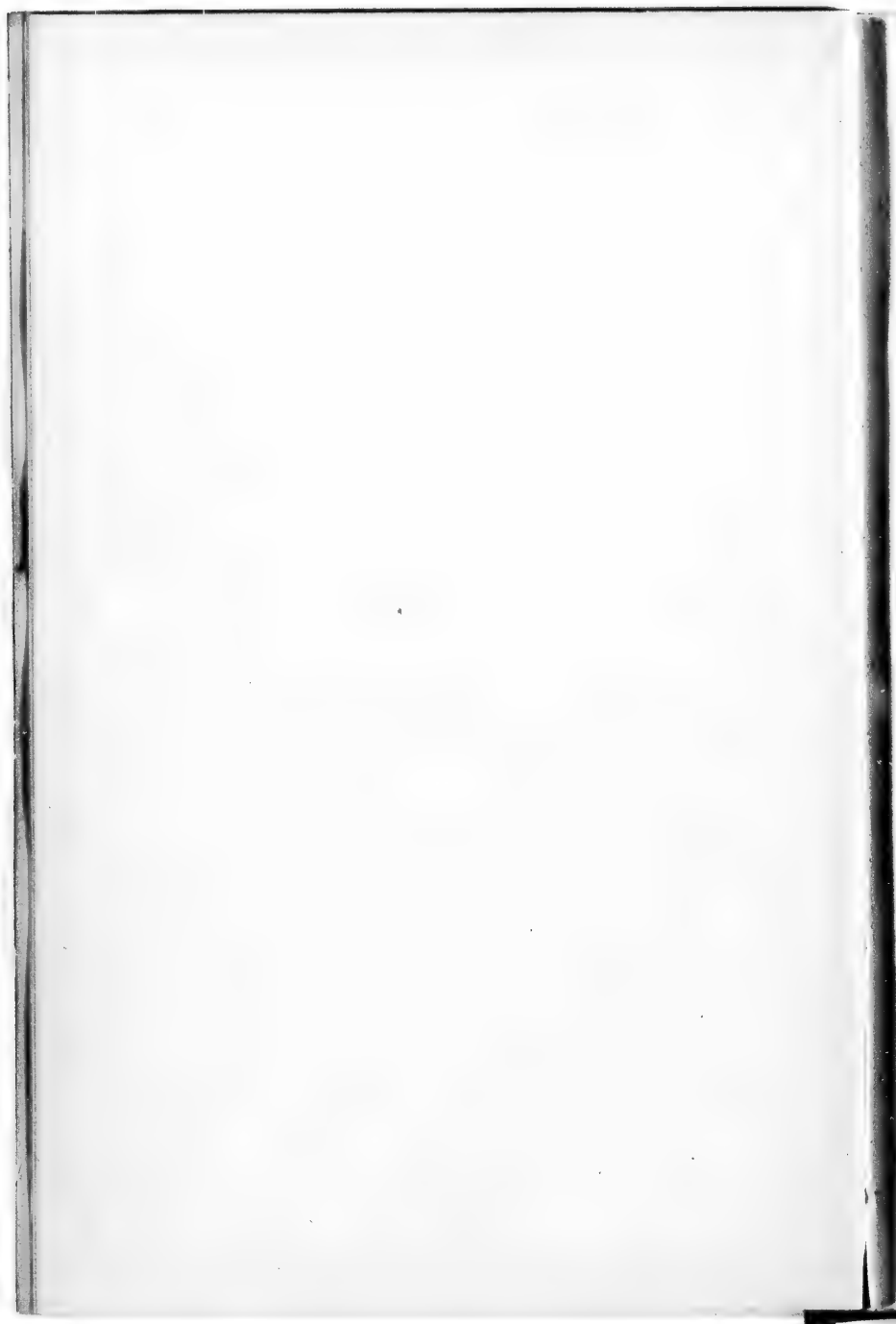
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BOSTON, MASSACHUSETTS,
22nd April, 1864.

MY DEAR FATHER,

When the "Europa" called in at Halifax, I sent you a line announcing my safe arrival on this side and gave a few details of the voyage and how under Hickson's directions to keep on eating, I got over the "Mal de mer" which came on the third day during the storm; from sympathy with our very sick neighbour. In connection with this matter, Alfred Brown declares that I have spoiled a pair of his boots, by filling one and not the other. He maintains that they will never be the same size again. We had a long and stormy passage. Although there were 120 first-class passengers only 7 were at dinner on the third day.

There was some very heavy weather just before we reached the Banks of Newfoundland. During the night a heavy wave struck the port fore quarter, broke away part of the bulwarks, damaged an officer's cabin and an adjoining provision storehouse, and sent the joints floating about the deck; one of the saluting guns broke loose, carriage and all, and one of the small cast iron wheels of the latter broke one of the triangular glass prisms, called Deck-lights, which was supposed to help to illuminate the cabin, mis-called State-

room, occupied by Alfred Brown (Alfred Brown, Esq., of Montreal, a well to do and well connected gentleman, a bachelor rather over forty I should say, a friend of Hickson's) and myself, we got a regular wetting and our light articles floated about on the floor of the cabin, however, we picked up the articles and were not much worse, turned out early and probably ate rather more breakfast in consequence.

The following night the heavy weather continuing and the Europa being rather down by the stem, that is by the nose, she shipped a sea every wave, the usual scuppers for draining the deck were quite insufficient, and the large flaps in the bulwarks near the mooring bits forward of the Paddle-boxes were braced up to allow the prompt exit of the super-abundant salt water.

The gentlemen passengers who were located in the forward cabin, to reach which they had to cross the engine space ran some risk, some did not face it but slept, or rather lay down in their clothes in the saloon or fidley, (this latter word means a covered space over the main hatch at the fore end of the structure or deck house containing the saloon) which furnished with rough seats is used by the passengers for smoking.

Several of us got wetted by the water which rolled from off the forecastle along the deck gangways at the sides of the forward deck-house nearly 2 feet deep; I lost my hold of the companion way door handle, port-side, through someone opening it from the inside and fell down, but luckily caught hold of a deck bolt and although the pockets of my pea-jacket were full of water so soon as the vessel rolled to starboard I reached the companion way. The steward was not very pleased at having the soaked clothing to attend to and grumbled, but was quickly rebuked and shut up by Alfred Brown, (with whom I seem to be a great favourite, and who calls me

Sonney) who seemed to me to be looking rather anxious. He had preceded me by about two minutes, and it seems, opened the door again to look for me, and when the water knocked me down was quite anxious lest I might fail to catch something and get washed through the large flap holes in the bulwarks, however, I think that the bits would have stopped one, but the rush of water as the vessel rose each time over the tall waves was very heavy. I did not mention anything of this in my Halifax letter lest I might alarm my mother concerning the remainder of the passage. The length of the waves in the middle of the Atlantic is very great, 400 feet is sometimes a moderate computation, and when a heavy head wind is blowing, as you stand on the quarter-deck while descending one wave you have to look well upwards, sometimes throwing your head somewhat back in order to see the top of the approaching one; of course it is to be remembered that you are on the downward half of the last wave, and consequently at an angle of say 45° in relation with the horizon.

But to leave the "Europa," and talk about Boston, (called by the natives Borsting.) It is an old settled place and therefore any expectations about a new appearance on ones' arrival in the New World are delayed in their fulfilment for a time, but I am told not very long.

We are staying at the Revere House, which is the name of the chief Hotel here. It seems to be customary here to call Hotels—*Houses*; the three chief ones are called Tremont House, Revere House, Parker House, and American House.

Boston possesses several quite—for America—ancient objects of interest. The Bunker's Hill Memorial, commemorative of the British defeat in 1775, which naturally the Americans are very proud of, and have a song about the Britishers coming up a hill, to go down again.

There is also the Faneuil Hall, called the "Cradle of Liberty," where the meetings of revolutionary patriots were held in Washington's time.

There are also two very pretty cemeteries, Mount Auburn and Forest Hills. The former is certainly most beautiful, and reminds one of the snug lying in Bath Abbey Churchyard, spoken of by Sir Lucius O'Trigger.

However, as it is late, we must now go to bed, and be ready to go by rail,—I mean "by the cars,"—to Portland in the morning. Portland is the chief town of the State of Maine, where the Maine Liquor Law prevails; I am very curious to see whether it is efficacious.

Meanwhile, with love to Mother and sister Lilly,

I am,

Your affectionate son,

W. THOS. NEWMARCH.

ST. LAURENCE HALL, MONTREAL,

April, 1864.

MY DEAR FATHER,—

The Maine Liquor Law, mentioned in my last letter, is all rubbish, and does not work at all. We left Boston early, and bumped along, but were delayed by an accident which occurred to a Yankee not sober, I think, who in stepping from one car to another, fell down and was run over. The Yankees hereabout do not seem to have much respect for human life. The train stopped, and the conductor and a number of others went to view the person injured; they soon returned, and one was questioned by a passenger,—a female, of course,—as to the result of the accident, which he summarised as follows: "Wa'all, Ma'am, " guess as how that ere cus is a gone coon, for I see'd the "conductortake up a piece of his back bone about so long," (delineating about half the length of his forearm). The body was left in charge of a railway man to be conveyed to a shanty near the line, and the train proceeded. It reached Portland late in the afternoon, and we went to an hotel to have dinner, and afterwards took a stroll round, and saw in the street a number of individuals, mostly males, obviously not sober, many more than would be met in Boston. At dinner some so-called Bass's Ale in pint bottles was produced with some mystery; it was remarkable for its badness and flatness, and the unanimous opinion was that it had never seen Burton-on-Trent. It was charged in the bill next morning at a high price as "cooked vegetables." We all retired to bed, I got up early in the morning, and went down into the bar, which is always the office of the hotel, where the proprietor, or "boss," and his clerk, or one of them, is to be found. In this case there was no

obvious liquor, but in walking round I observed two hard-faced looking customers—one with a rosy nose—come in and go up to the boss and wishing him the “top of the morning,” ask very civilly if they might “see the baby.” This seemed rather a strange request, so I thought I would follow their example; went out, took a turn for two or three minutes, came in again, went up to the landlord, who recognised me as a sleeper in the house, and enquired how I had slept; whereupon I thanked him politely, and enquired tenderly after the landlady and his offspring, and said I should like to see the baby. He agreed promptly, and said if I went upstairs I should find a chambermaid who would direct me to the room where the nurse and baby were. I went up, met the chambermaid, who showed me into a large room close by, where there was certainly a baby on a large four-post bed, in charge of a girl, also an oldish woman, the nuss, on the far side of the bed, which latter served to hide several earthenware jars filled with spirits. There were present the two hard-faced men, drinking spirits, of which the room smelt strong. I was rather doubtful as to what I should ask for: I had been told that sherry cobbler was a great drink, but I did not see any signs of it; so I said, Bourbon whisky and water (Bourbon whisky was talked of on board the steamer as the best whisky). The old nuss said “No Bourbon here.” One of the men promptly suggested, “Better have something short,” to which I assented, and was served with some supposed whisky in one little tumbler, and some water (rather doubtful looking) in a second little tumbler. I poured some of the water into the spirits to dilute the spirit; whereupon one of the men immediately observed “Guess you’re a stranger: you see “the way here is, “you drinks the whisky fust and the water afterwards; like this,” and he poured the contents of his little tumblers down his throat successively. I enquired

whether he would like another glass with me, to which he promptly assented; and his friend, without invitation, said he could take one with me also. So two more were served; I just tasted mine, and they tossed theirs off. I then suggested payment to the nurse, or nuss, who charged me about 1s. 9d. for the three liquors. It then came out that the two men had each had three goes before I arrived, and were getting on already, as the saying is.

I departed without delay, and went upstairs to rejoin the party of us who were all going to Montreal, at breakfast; and being asked where I had been, I replied that I had been "to see the baby." There was a general laugh, and Alfred Brown thought I had found out pretty soon where the baby was. Two of those at the table were English, and opened their eyes in wonderment as to the use of seeing the baby; however, the others would not tell them, but said they would all go and take them after breakfast. I took the hint and held my peace, and would only explain that the baby was rather a nice one, and that, not being accustomed to babies, I could not tell whether it was boy or girl. They all went to see the baby, and were not impressed by the practical results of the "Maine Liquor Law."

We then went to the Dépôt, the name by which a railway station is here called, and got on board for Bangor and Montreal.

Yours, &c.,
W. T. N.

ST. LAWRENCE HALL, MONTREAL,

May, 1864.

MY DEAR FATHER,

We reached here just before May-day, and found the ice breaking up and flowing away rapidly down the river in large floes. It is very warm already. Montreal is a city beautifully situated on an island which lies between the St. Lawrence and the Ottawa. The island is considerable, being about twenty-two miles long and seven miles across, or just about the size of the Isle of Wight. The city extends about three miles along the north bank of the St. Lawrence, and the buildings rise in rows the one behind the other, as the various streets are built higher up the face of two rather imposing hills called "the Mountain." The Mountain is clothed with trees from the middle to the top, and the buildings peep out from among them. The Roman Catholic Cathedral, a large building with two square west towers, is the most prominent object, and the English Cathedral, with a tall and graceful spire, situated somewhat higher up, is the next prominent object. Mr. Hickson proposes to settle down in a house in Inkerman Terrace, and I am to live there so long as I remain in Montreal.

Montreal is connected with the southern bank of the river by means of an ice road in the winter, a bridge of boats in the summer, and by the railway viaduct all the year round. The railway bridge is one of the largest and longest in existence; it is $1\frac{1}{2}$ miles long, and is very similar to the Menai Bridge, but single instead of double; it is quite dark inside,—in fact it is best described as a gigantic iron tunnel suspended in the air. Mr. Alfred Brown has a very handsome bachelor's establishment near Mountain Street. I was there at dinner last evening, and he told the story of the boots, which raised a great laugh, somewhat at my expense.

You will remember I mentioned them in one of my first letters. One gentleman suggested that they should be produced, to see which was shrunk.

I have been introduced to various people here, including the Hon. James Ferrier, Mr. C. J. Brydges, and others, and am to go with the latter on one of his railway journeys West, shortly. He has a car which has two bedrooms, or rather cabins, containing two berths each; also a saloon, butler's pantry, fitted up with plates, dishes, glasses, and a wine bin; at the other end of the car a place with a stove, used for cooking—altogether a complete establishment, which serves for a residence for Mr. Brydges and his staff when he goes along the Grand Trunk Railway to visit the various stations.

As the line is 1,023 miles long in one length, besides branches, which make a total of 1,377 miles in all, the expedition over even one section takes some time. It is divided into sections, of which there are four. Portland section—Portland in Maine to Montreal, 293 miles, crossing the U.S. frontier at Island Pond, in New Hampshire, 150 miles from Portland; Quebec section,—Rivière du Loup to Quebec, 120 miles, Quebec to Richmond, 96 miles, where it joins the Portland section, 64 miles south of Montreal, making 280 miles in all; Central section,—Montreal to Toronto, 333 miles; Western section,—Toronto to Sarnia, a port at the extreme west of Canada, close to Lake Huron, 190 miles. The distance from Boston to Montreal, via Portland, is 405 miles.

However, I daresay you know all about these matters already, so I will not trouble you with any more particulars.

Yours, &c.,

W. T. N.

INKERMAN TERRACE, MONTREAL.

May, 1864.

MY DEAR FATHER,

I have not been quiet very long. Hickson had been settled in this house a few days, together with a friend of his, Mr. Samuel Waddell, a very handsome man, a Canadian, and myself. Hickson was rather poorly with an attack of Canadian diarrhœa, and had gone to bed; I sat up with him awhile, and then went to bed myself. About 2 a.m. a violent knocking came at the front door, which woke me; so I jumped up, put on my slippers, and went out to go down to the front door. The man was shouting as well as knocking, and Hickson said it must be an important telegram, as he recognized the man's voice, as belonging to the Telegraph Department. I told him to lie still, as moving was very bad for him, and I would go down and see what it was.

Sure enough it was a telegram, and the news very urgent and serious, but not agreeable, and to the effect that a train from Quebec, crowded with German emigrants, had gone through the swing bridge in the viaduct which crosses the River Richelieu at Belœuil, about 18 miles south of Montreal; that 100 or so were killed; that the confusion was great, as the railway men spoke English, the habitants French, and the emigrants German; that a message had been conveyed to Mr. Brydges, who had sent word to the Superintendent to prepare a breakdown train and gang as soon as possible, and be ready to start as soon as he reached Point St. Charles, where the railway head-quarters are; that they wanted five or six people who could speak German to go also, so as to understand the language of the sufferers.

Hickson was horrified, but very prompt. He shouted to the man—"All right; you go and get two doctors, or three

if you can." He turned to me and said, "How about the Germans?" I saw he was nearly fainting, so I gave him some brandy; and when he rallied a little, told him that I had been six months in Germany the previous year studying the language at Gotha, and spoke German quite well. He said "Very good; Will you go? Will you go?—you are just the very individual for the job. But, mind, you will not find it a nice job!" I told him to quiet his mind; that I should be only too glad to be of any assistance, and would be ready in five minutes. He said "Here, take the brandy with you, and some biscuits," and then sank down in his bed. I waked Mr. Waddell and the housekeeper, who got up very grumpy, until they understood the serious state of the case in all way.

So I dressed, and left with the brandy bottle and some biscuits in my pockets, on an expedition from which I returned about two hours ago; but here I must break off until the next occasion, as a messenger from the General Hospital has just arrived and wants me to go to the General Hospital as soon as possible, by desire of the Hospital Steward and the acting Surgeon on duty, as some of the pieces of white paper pinned on to the Protestants have got rubbed off and a question of re-sorting them has arisen. A second messenger arrived since who wants me to go to Point St. Charles, where the least injured emigrants have arrived, and where confusion is rampant.

Shall go to latter place first, so am off, and must postpone further remarks on this awful business till next mail. These religious sortings are simply scandalous under such serious circumstances, and must take care of themselves for a while. Will resume the emigrant affair in my next letter.

Yours, &c.,

W. T. N.

INKERMAN TERRACE, MONTREAL,
May, 1864.

MY DEAR FATHER,

At the end of my last I said I would defer any further allusion to the railway accident matter until the next Mail.

After the sufferers left the railway station for the two hospitals, I returned to Inkerman terrace, as I was quite exhausted, having had nothing to eat since three a.m. except one biscuit and a little water, the other biscuits and the brandy having been used early in the morning to sustain the severe cases and the little children. My head ached frightfully from the heat of the sun, which was unusually hot, having been on the back of my neck all day, as I stooped over the sufferers. I had some tea and bread, a good wash and change of clothes, and fortunately my nose bled, which relieved me from apprehension of sunstroke, a not uncommon affliction here in summer. I fell asleep for a short time, and woke up pretty well again, and soothed myself with writing my last letter, and was interrupted by the messengers mentioned therein. After deciding to go to Point St. Charles, I took some more food with good appetite; went up and saw Hickson about the messages, who ordered his man to go for a vehicle to take me to Point St. Charles where he agreed I should be much wanted to settle the convalescents in the freight shed.

But to return to the proper sequence of the story.

On the arrival of the breakdown special at Belœuil (the word train is always omitted, but taken as understood by railway people) a terrible sight awaited us, the local railway men, assisted by a few habitants, had done their best and pulled as many of the dead, dying and bruised people out

of the Richelieu river as the grey light of the dawn had enabled them.

The dead lay in a row on the inclined bank, but the less about the unfortunate drowned and mutilated the better; they were then uncounted but ultimately numbered 89.

Of the wounded—some lay, some sat, some crouched further up the bank and tried to bandage up their own wounds or the wounds of those belonging to them, by means of shreds and pieces torn from their clothing. There was one little baby saved through a window of the 2nd class car from the stiffening arms of its mother.

It is necessary to explain that next to the locomotive came the head guard's break, filled with luggage; next to that 2 baggage cars, next to that a 2nd class car which had contained nearly 60 passengers; the locomotive fell into the gap of the drawbridge, on to the top of the second of two barges which were passing through the drawbridge, broke the deck in and the barge in half, and sunk it. The stoker was killed; the engineman, to whose neglect may be attributed the accident, jumped off as the engine fell and swam out of river. The guard was killed, having apparently held on, twisting his break hard down and going down with it.

The break car and the two succeeding baggage cars, added to the sunken barge filled up the river space of the open drawbridge, almost to the surface of the water, and the 2nd class Car, which came next, went down on its fore end on the top of them; all the seats breaking away from the sides and rushing down to the fore end, together with the people seated between them; thus forming a mass of broken wood, broken legs and dying passengers; the car then tipped over nearly bottom up, and settled in somewhat shallow water, within a few feet of the northern bank of the Richelieu river, which was only about forty feet from

inner buttress of the drawbridge. Nearly the whole of the passengers in the 2nd class car, except the baby and a few others, were killed or drowned, but the other emigrants fared better; they were in baggage cars and had their bedding with them, upon which they were lying asleep, and there being no seats, their lower limbs were not fractured, and although they were all turned upside down, and so remained for awhile and their faces consequently became nearly black from suffused blood, and although generally somewhat badly bruised, they were not otherwise much hurt.

The breakdown gang set to work to get some of the cars burst open, the sides lifted off, and those who were fixed in the pieces got out. A shed used for merchandize, such as flour barrels, &c., was cleared and the corpses removed into it, from out of the rays of the sun, which now began to shine brightly. The work went on till about noon, at which hour all had been extricated and landed, but the crying of the children had become terrible, and the Railway Managing Director coming near where I was, asked one of the Doctors, (of whom several had arrived by another train) what could be done to stop it, I suggested that milk and soup would, I thought, stop their mouths successfully; the doctor agreed. \$50 (fifty dollars) were handed to me and I started with six men to go to the neighbouring cottages of the habitants and buy up their dinners, and being able to speak French, after a little negociation, we succeeded, in consideration for about one-half of the fifty dollars, in securing a lot of milk, a good deal of bread and cakes, and some soup with meal in it, also some cups and mugs to serve it in, and set the housewives to work to make a lot more similar soup. The provisions produced a remarkable diminution of the noise.

About this time arrived the Mayor of Montreal and

some others; two or three members of the Montreal German Society to act as interpreters; also the religious authorities both Catholic and Protestant and the Hospital authorities.

It was announced that a long ambulance train would be there in two hours, and the wounded were to be prepared for the journey. Then arose a question, a most awkward question in such a situation, namely, as to what was the religion of the several emigrants. As the number of cases, about 150, were too numerous for the Montreal General Hospital, the Protestant institution to take, the authorities of Hotel Dieu, the Roman Catholic Hospital, offered to take the Catholics; so a process of sorting commenced by the members of the German society; they asked questions of religious creeds, but the unfortunate emigrants were so dazed with having been turned upside down so long and from want of food, that very little result was obtained. I recollected that the mother of the saved baby had a crucifix round her neck, so I went, and after some difficulty got it out of the mortuary shed, and by shewing it to the sufferers and noting whether they crossed themselves or merely bowed, the Roman Catholics were easily distinguished from the Lutherans, and were ticketed. The Protestants were distinguished by a piece of paper (both paper and Protestant begin with P) pinned on to them; the members of the German Society fastened the papers on to the backs of the emigrants, those done under my supervision had their papers pinned by one of the sympathising habitan housewives, near their left breasts, either inside or outside their clothing. Of this anon.

The ambulance train arrived, and was slowly and tediously loaded, as the wounded had to be carried up a steep incline from the river bank, in order to reach the level of the railway, the viaduct being forty feet above the level of the water.

The train left for Montreal, and on arriving at the Bonaventure street station was unloaded, and the emigrants conveyed in military ambulance waggons, in vehicles of various kinds and on stretchers to the two hospitals; the Protestants, to the number of about ninety, to the General Hospital, and the Roman Catholics, about sixty in number, to the Hotel Dieu. I walked with the cortage a short way, and then finding myself very exhausted, with a frightful headache, arising from the heat of the sun on the back of my head and neck all day long, while stooping over the emigrants, besides being stained with blood and dirt, I with difficulty got a cab and went off to Inkerman terrace, as related in my last. At the General Hospital the injured were accommodated on mattresses, arranged round the various rooms, as the number far exceeded the available accommodation. At the Hotel Dieu, whither I did not go, I believe they had rather more space. At the General Hospital they had supper and some stimulant, and were allowed to go to sleep. At the Hotel Dieu I believe the doctors unwisely started to look after the wounds, and nearly lost two or three by hæmorrhage,

I will make a pause, as I am wanted by Hickson, who is calling from his bedroom (he is much better) and will begin in my next by relating what happened at the Dépôt, at Point St. Charles and afterwards at the Hospital, from which I returned very late last night.

Yours, &c.,

W. T. N.

P.S.—Don't be alarmed about me, I have slept well, have no headache and have had a good breakfast, and am ready for a further turn at the wounded unfortunate emigrants, and am anxious to learn how matters go on, both at Point St. Charles and at the Hospitals, especially about the baby, poor little motherless orphan.

MONTREAL GENERAL HOSPITAL,
May, 1864.

MY DEAR FATHER,

From the above address you would suppose I had turned Medical Student, but that is not so. I am taking an opportunity to write a letter in the Committee Room; but to resume the account where I broke off in my last letter. I rode in a cab to Point St. Charles, where I found that the least damaged emigrants had arrived, about 200 in number, as also some of their baggage, beds, &c. The latter had been used, together with a lot of straw and some sacks, to form beds in a freight shed adjoining the platform.

The men were intended to be located at one end and the women at the other; a screen of empty boxes, &c., being piled across the middle; but although food was served from the Refreshment establishment gratis, at the cost of the Railway Company, and distributed in the shed, the people keep moving about, especially three or four men, a low looking lot, who would intrude into that portion of the shed allotted to the women. These men laid claim to various articles as their property and endeavoured to move them, utterly regardless of the comfort of those reclining on or near them. A violent discussion ensued, and the railway men (a fresh relief) who did not understand one word of the language spoken by the emigrants, turned the offenders out of the women's part. On my arrival, the unfortunate emigrants looked rejoiced, and several, who could walk or hobble, came up to speak and complain of thieving, so also did the railway men. I explained to the emigrants, that for the night it was necessary to separate the men from the women, as it was difficult to know their respective relationships. It seems that their grievance

was that while they rested themselves and tried to sleep, the wandering men came and tried to steal various articles of clothing, &c. They especially evinced a great dislike of one man, a Bohemian, and they trembled at him, called him "schurke and dieb," rascal and thief, and wished him away. I had heard on the train as we returned, a story, that just before the breakdown train arrived in the morning, a man (who turned out to be this very Bohemian) was caught trying to steal from the dying mother of the rescued baby, a bundle of bank notes, from within her stays. In the confusion of the gloom, it seemed only as if he were easing her staylaces, as she lay on the bank, but her cries and struggles attracted attention, and a railway man, a platelayer, noticing that the woman seemed to resist the man's apparent succour, seized him and caught his hand, out of which fell a bundle of bank notes, and with an oath of fury, the platelayer gave him a violent shove and a kick, and sent him down the bank, head first into the river. No one would help him out; he tried to approach the bank, but the oaths and hostile signs kept him off and he seemed likely to be drowned, for he disappeared to no one's regret. But it seems he got hold of a broken piece of timber from a Car, and afterwards of the Car side and got out when the breakdown gang set to work. None of the railway men present could recognize the Bohemian, but they said that the platelayer's foreman and some of his men (who had all gone to bed, being quite exhausted) could; so I sent for the foreman, who came, and the moment he heard the complaint about the stealing, turned round, saw the Bohemian, with a cry of "here's that thieving brute again," sprang on to him, floored him, called upon the other men to seize him, that he deserved lynching there and then. However, luckily an inspector, two serjeants and several policemen,

sent by the mayor arrived, to take charge for the night ; he was secured and handcuffed, although he tried to get on his knees and appealed to the Virgin Mary to attest his innocence. Many of the emigrants looked much relieved and smiled faintly at his departure. The Bohemian was locked up in a small sort of place for the night ; his companions were ejected and made to lie down on some sacks outside, with a policeman in watch over them.

Things quieted a little, but as I went round to enquire if they were all comfortable, and advising them to go to sleep, that they would have breakfast in the morning, a man said that he could not sleep as his arm was broken : he was carried to the waiting room and doctor sent for. A woman who was nearly fainting and seemed to be in great pain, kept crying for " Heinrich " ; I asked who Heinrich was, and went and called Heinrich among the men, but only one answered and he said that he had no wife. One of the women near by got up, and speaking in a low tone to me said, that the woman was " schwange und vielleicht gleich im Niederkunft fein wurde," which meant that she was taken in a premature confinement, so she was carried to the ladies' waiting room and laid on the sofa ; the doctor just arrived confirmed the view, so the woman who gave the information, the wife of an engine driver, and the doctor attended her, and before next morning there was a baby. A second case turned up a little latter on, after I had left to go to the General Hospital on my way home.

The man and the cab had both waited, whereat I was surprised, but very glad. The platelayer was fidgetty, he wanted to learn that the baby was all right, he suspected the Bohemian of all sorts of evil intentions, so I offered him a lift to the Hospital. He had kept the notes in his trousers pocket, and asked me to take them. I said he had better hand them over to

the Hospital authorities. He told me the remainder of the story about the baby; the baby on its rescue (a fine little girl, about seven or eight months old—my experience in babies and children since Portland has been considerable) was taken to a French habitans cottage, where it was fed, after which it was with difficulty soothed to sleep, but soon awoke crying; the woman took it in her arms and came out with a notion of finding its mother, and passed near where the poor dying woman (her spine and lower limbs were seriously injured with the broken seats of the 2nd class car) was lying; the poor mother called out faintly, having recognized her child. The baby was placed in her arms, the platelayer put the notes in the baby's bosom, then signing to those around to take witness, he put them into his pocket, took them out again to restore them to the baby and then replaced them solemnly in his pocket. The poor mother looked gratified; some one gave her a little water (nothing else had then arrived) the little baby nestled down in its mother's arms, from which it was taken after she had quietly expired.

This touching story, related by the rough but kind hearted man and accompanied by tears, which he brushed away with his black and toil worn hand, nearly upset me; I shed tears freely, and only just succeeded in wiping them away as we arrived at the General Hospital, which was at some distance from Point St. Charles, and nearly all uphill.

On our arrival we found that a religious conclave was sitting, composed of a German Lutheran Parson, a Roman Catholic Priest, a member of the German Society, one of the Hospital Surgeons and the Hospital Steward.

It seems that some time before, one of the elderly female emigrants was in extremis, but as her religion

was not known, the member of the German Society (one of those who went down to Belœuil) went to the Ward, and, contrary to the nurses remonstrances, persisted in questioning her; the nurse fetched the House Surgeon who ordered him out of the Ward, the member still persisted, so the doctor turned him out, as he was disturbing both the poor old woman, and the others in the Ward.

The member fetched the German Parson, and the Romish Priest called, having been sent by the authorities at the Hotel Dieu to enquire if there were any more Catholics, as they had some room left at the Hotel Dieu; in fact, as they understood that the General Hospital was crowded, they would take a few patients, irrespective of faith, if it was desired; but the German Parson and member were hotly opposed to any such abomination, as taking a Protestant to a Catholic Hospital. The discussion went on, so to turn the subject, I said I had brought a man with me, a platelayer, who had found some bank notes, which belonged to the orphan baby, and he wanted to place them in a safe place. The German Society member said he would take charge of them, and the German Parson was equally prompt; the Priest enquired whether it was known whether the mother was Catholic or Protestant. Catholic, undoubtedly, I replied; I have her crucifix in my pocket, which I got to use to sort the wounded, as that gentleman, indicating the Society-member knows. He said, Oh! I suppose you know a lot have got mixed, again? I said I had been informed that some tickets had fallen off. He replied, he supposed that I (indicating me) had not pinned the tickets on tight; to which I had a good answer, that they were nearly all pinned on by a French woman, who brought her curious old pin cushion with her, without which I cannot think where pins enough could have been obtained.

At this moment the matron came in and said, Oh ! the tickets which were lost were those fastened on the backs near the neck. Then, I immediately put in, they could not be mine, for mine were all on the left breast in front, over the heart. The matron interrupted, that the cases with the front tickets were all safe and the sufferers took great care not to lose them ; she proceeded to say that she had come down from the poor woman, for whom she and a nurse had been doing all they could, but who was obviously dying, and she ought to have religious comfort, and would they be so good as to settle her religion without delay. I said quickly, oh ! I have the crucifix here, and will come with you and ascertain in half a minute. But says the matron, she can't answer questions, that gentleman, indicating the Society-member, has been asking her questions ever so long and bothering her. I reassured her by saying I ask no questions, I only use this emblem, exhibiting the crucifix from out of my pocket, it is quite effectual.

The Catholic Priest, in rather bad English, endeavoured to state that my method was the correct one. Young man, pray go without delay ; whereat the German Parson enquired rather curtly, and pray who may you be, that you make selections so quickly ? Oh ? a young Yankee, belonging to the Railway Company, I suppose, said the Society-member, probably from Boston or the New England States and trained at Harvard ; an Unitarian I suppose. I was much nettled, and told him straightly, that I was not a Yankee, nor a Unitarian, nor did I belong to the Railway Company ; but an Englishman, educated at King's College, London, an Associate in Arts of the University of Oxford, and a member of the Church of England.

The Priest bowed respectfully, and so I waited no longer, but said to the Matron, Please lead on, and went ;

the Society member was following up stairs, when the matron barred the way and called to the Steward, who had come out into the hall, you must keep that man away, or he will disturb all the patients; so he sulkily went down again, and the matron and myself went into the Ward to the dying sufferer. She, apparently, took me for a young doctor and shook her head, but I exhibited the crucifix and held it in the usual attitude over her. She regarded it with evident pleasure, and tried to raise herself on her one uninjured arm. I gave the crucifix to the nurse, who was kneeling on the other side and who was crossing herself; the Matron and I raised her about a foot from the mattress on the floor, very gently, when, of her own accord, she used her one good arm, the left, to cross herself several times, and make nods intended for obeisances, and muttered some latin words. It was quite clear she was a Roman Catholic, so we laid her down again. As I was moving away, I put out my hand to the nurse for the crucifix, when the dying woman put out her hand and muttered rather more loudly "geb mir," give me, meaning the cross, which I did, when she kissed it several times.

I left it with her, and beckoned to the matron for us to go down. There was the sulky Society member with the Steward looking after him. He said, loudly—Well, you hav'nt been long. The Matron snapped at him, Don't talk so loud and disturb the poor people so! I said we will go into the Steward's room again, and the Matron will report what took place. Oh! 'tis all humbug, said the Society man. I contradicted him flatly, and asked that the Priest might go up and see the woman without delay.

The Priest started with the matron, when the tiresome man said, but I'll go too to see all square; so I turned to the Steward and requested both him and the Surgeon

and the German Parson to take witness of his uncalled for behaviour; explained that, having been under the tutorship in Divinity of Dr. Jelk and Professor Plumtree, and taken a high place twice in the Divinity class, over 200 strong, I perfectly understood the whole matter in dispute. The Surgeon who said he was a Presbyterian quite agreed, and said that the Steward, in the absence of a member of the Committee, had his authority to turn the man out by force, if necessary, for being noisy and unreasonable.

The German Parson, who had been talking in German with the Society member, spoke in favor of the member. My nerves having been under tension all day, I turned upon the German Parson, and said "das es entsetzliih "war das ein Geistlicher solcher Betragung bei solcher "Gelegenheiten in Schutz nehmen sollte." (That it was scandalous for a clergyman to defend such conduct as that of the Society member, especially under such circumstances.) The man looked surprised at my speaking in German and obviously felt that I had understood their mutual conversation, his expression showed it, I nodded to him affirmatively. He blushed and immediately proposed to the Society man, "Come, let us go, that young fellow knows too much." They departed.

During this time, it was not however long, my friend the Platelayer had been seated in a chair in the vestibule and had had a nap, but the opening of the door awakened him, and he jumped up and said "How about this money?" The Germans heard the man's words and the member turned round to come back again, but the Steward held the door with his foot. "I must come back." "What do you want? I've had enough of you," said the Steward, a fine tall man. I suggested to the Surgeon, who stood near, to let the Parson come back, which he did, the other man waiting outside. After a short

discussion it was arranged that the Steward should take charge of the papers for safe custody in his own safe, contents unknown and give a receipt which the Surgeon and myself would witness and which I was to hold for a day or two till the matter could be gone into.

I left very tired and drove to Inkerman Terrace, giving the Platelayer a ride. He fell asleep again, being quite exhausted. I gave both him and the coachman some beer on our arrival and sent them on to his home.

Went into the house just as the clock struck 2 a.m. which reminded me that it struck the same hour as I got up just 24 hours before. I went to bed and slept soundly. When I rose in the morning the Housekeeper informed me that the front door had been left open all night. I suppose I forgot it, but no harm was done, so good-bye.

With love as usual.

Yours, &c.,

W.T.N.

INKERMAN TERRACE, MONTREAL.
May, 1864.

The next morning Hickson, who was a good deal better, sent to and fro and held a sort of conference and I was asked to continue to look after the wounded at the Hospitals and also the other sojourning emigrants who were in the goods shed at Point St., Charles, the railway head quarters, and where the Workshops were, distant nearly two miles from the City and not far from the Northern end of the suspended iron tunnel, *i.e.*, the Victoria Bridge.

Matters went on pretty well for a day or two, but at the General Hospital nurses, even bad ones, were very difficult to obtain and worse to retain, as the emigrants were in a very dirty state and full of vermin from their six week's voyage in the hold of a Norwegian sailing ship. The bedding which they brought with them, *viz.*: their feather beds (which they much prize) and pillows might almost have walked upstairs by themselves. Disinfectants, fumigations, &c., were vigorously applied which made every one cough so that it might have been taken for an Hospital for Diseases of the Chest, but it was no go, the parasites flourished, and to make matters rather worse two or three cases of small-pox broke out. The nurses refused to stop longer and cleared out; — the bedding of two rooms was burnt. But how about the nursing without nurses?

The difficulty was got over in a manner which I am sure you would not guess at in a week, however, I will give you a week, that is until next mail, to try.

I may state that there are now at work 16 efficient nurses with a Superintendent by day and a similar

number by night, who do their work splendidly without any apparent fear of the small-pox which has frightened the nurse and the German Parson away altogether.

My time is fully occupied, a committee sits to hear and adjust the compensation claims of the convalescent emigrants in the Freight Shed, of whom a majority want to get away to the State of Wisconsin to get settled and be ready for the harvest. A large district in Wisconsin to the north of Milwaukee, is settled almost exclusively by Germans and Bohemians.

The difficulty of communicating (in their own language) with, and giving religious comfort to the Bohemian and Czeckish portion of the emigrants, was got over by finding an old Polish man, called Zowski, retired from business, who was already a sort of missionary attached to a chapel. He spoke Czeckish and German and bad English; he was very useful, especially among the convalescent at Point St. Charles, nearly one half of whom were Bohemians.

The baggage belonging to the emigrants had been fished out of the river Richelieu, and brought up and discharged alongside of the goods shed, but the heat and the water together produced rapid decomposition, and the early distribution of the least injured portion became very necessary. In order to facilitate matters, each of the three regiments stationed in Montreal, sent eighteen men and two non-commissioned officers each night to keep order and assist generally, as the railway men were only on duty during the day. At this time there were stationed in Montreal, two battalions of Foot Guards, brought over in the Great Eastern at the time of the Trent affair, and the 30th regiment of Foot.

Sunday approached, and the question of a Religious Service was raised. The German Parson declined to have anything more to do with the emigrants anywhere,

by reason of the three cases of small pox at the General Hospital. No other German could be found, so the service was conducted on the Sunday afternoon, by old Zowski, who read some prayers in German, commencing with the Lord's Prayer, in which most of the emigrants joined; also the third chapter of the Epistle to the Thesalonians was also read. Your son conducted the singing of the Old Hundred to Luther's tune in German, "Nun danket alle Gott," and preached the sermon in German, from the well known paragraph in the Burial Service, "In the midst of life we are in death"—"Mitem in leben finden den Todt."

The audience were much moved and many sank on to their knees in tears. The Lord's Prayer was again repeated as a finale. The sermon was a complete success.

On the Monday evening, several special cars full of emigrants were attached to the express going West, through to Sarnia and Detroit. Remarks on the conduct of the German Parson are frequent and pungent.

Yours, &c.,

W.T.N.

INKERMAN TERRACE, MONTREAL.
May, 1864.

MY DEAR FATHER,

To return to the Nursing question the solution of which you have probably not yet guessed, which fact I shall be unable to learn for nearly three weeks more yet, when the return mail will be due.

Don't be afraid of this letter, there are no more small pox cases and the General Hospital has never been so clean in its life.

At the Hotel Dieu the sufferers were nursed by Nuns, (the Sisters of Mercy,) and to the great credit of the authorities of the Hotel Dieu, they arranged to send 16 sisters by day and a similar number by night to nurse at the General Hospital. The ladies came, each batch accompanied by a Superioress and soon the whole face of things was changed. A lot of clothing was purchased, the old clothes were taken off and burnt, the rooms were swabbed out with chloride of lime, and all the patients were, more or less, washed.

Of course the patients had been separated according to sex in different rooms and on different floors, the females on the second floor, and in one of the second floor wards a Sister Rosaline took charge of the orphan baby.

If it had not been for the vigorous cleansing, to which many of the patients greatly objected, no doubt the small-pox would have progressed, but it was thereby limited to the three cases who were kept isolated in another part of the building.

None of the Nuns were the least affected. Sister Rosaline promenaded on an open gallery with her orphan foundling, with the baby's head shaded with her black hood. The other nuns kissed the baby, which was pretty

and good tempered and caused some considerable perplexity to the nuns by its desire to suckle instead of taking its bottle ; it was a little girl eight or nine months' old. A wet nurse was found, but Sister Rosaline could not bear to part with the helpless pet ; however, through the Matron of the Hospital (a very active sensible lady, a widow of middle age) an arrangement was come to, for the wife of one of the Porters, who happened to have a baby on hand, to assist.

A Special Commission was nominated by the Canadian Government, to assess the compensation to be given to the injured. Two members of the German Society, the President, (a respectable old gentleman in the fur trade,) and the contumacious and active member already mentioned, (he was also in the fur trade, but had not a very good repute), Hickson and two Government officials, one being English and one French, were nominated and sat, and I should have had a seat if I had been of age, which of course was not the case.

Yours, &c.,
W.T.N.

INKERMAN TERRACE, MONTREAL,
June, 1864.

MY DEAR FATHER,

As you will have already gathered from my last four letters, I have now been occupied with the emigrant matter about six weeks, and am glad to say that nearly all the cases are settled. The baby has a pension; the claim of the rascally Bohemian, who had the impudence to employ a solicitor in his behalf, not daring to put in an appearance, was dismissed, and the solicitor roundly scolded for having anything to do with such a rascal, who just escaped punishment by not having (although not from any fault of his own) stolen the dying woman's property.

The heat has been great, and in consequence of the forests on the Ottawa having taken fire and the smoke therefrom hanging over Montreal, the temperature has sometimes been up to 103° Fahrenheit in the shade. I am told I am looking rather pale and thin, and the Hospital Surgeon says I had better take a holiday and change of air. However, I have just bought a nice little Canadian horse instead, and go out riding round the mountain and to Lake Lachine, which is better than a change of air until it is a little cooler, when I purpose going West to Blandville, Kingston, Toronto, Hamilton, Niagara, or as I ought to say "the Falls," and thence to London, C.W., Detroit, Sarnia and on into the United States to Milwaukee and Chicago. I find that the special favour of the authorities of the great Railway Company here is everything. The case it seems to me is shortly thus:—The distances in North America being enormous, and the available means of communication being as yet, in most cases, far below the requirements of

trade, the owners of the various Railway and other similar Transport Companies (as they are called out here) enjoy an enormous influence both in the States and also here in Canada. Here it is jokingly said, that the three chief authorities are the Governor General, the Commander of the Forces and the Managing Director of G.T.R. A further remark is also made that such statement is quite correct, except that the order might be reversed.

I hear the hoofs of my pretty little Canadian bay horse or rather mare, coming round from the yard to go for a ride with the two young Brydges, round the mountain to the Mile Race Course, which is situate there, where I purpose trying the little mare against their crack ponies. A whole party goes out usually on Saturday, consisting of Brydes, Hickson, Taylor, of the Bk. of U.C., Yates the Engineer, Wood the Secretary (who has just learned to ride), and Jenkins, the European Assurance Chief Agent, a fellow with very long legs and a very short back. We put him on my mare a day or two ago, and his feet nearly touched the ground, but he did not sit as tall as I do, although when on our feet he is six inches, or nearly so, taller than myself.

Yours, &c ,
W.T.N.

CLIFTON HOUSE, NIAGARA FALLS, CANADA,
17th July, 1864.

MY DEAR FATHER,

I have now arrived at the great physical water attraction of this part of the world. On my road I stopped at Kingston, one of the oldest towns, where there is an old fort, which existed before England acquired Canada from the French. Kingston stands at the Eastern extremity of Lake Ontario, where the St. Lawrence leaves it in its course to Montreal. In this portion of its course it is called the River of the Thousand Isles; a number of Isles which have necessitated a great number of lighthouses in order to render the navigation safe.

I also stopped two nights at Toronto, which is a large and increasing City and the Capital of Upper Canada, as also the seat of the Legislature for that Province. It is situated on the northern shore of Lake Ontario, about two-thirds along the northern shore going West; Lake Ontario is the first of the series of five great lakes in the course of the St. Lawrence; viz., Ontario, Erie, Hudson, Michigan and Superior. Lake Ontario is about 170 miles long by 70 miles wide, and very deep.

There is a University at Toronto, in a handsome modern Gothic building, on a height a few miles back from the City and surrounded by a beautiful park. A gentleman to whom I was introduced, lent me a horse, and a party of us rode out, and, after visiting the University, had a little galloping and racing across the sward of the Park. The horse I was on was a curious little well bred chestnut mare, who bored more than even highly bred horses usually do, and had a most peculiar trick when galloping of carrying her nose low down, with her head and neck

on one side, so that one saw the ground in front, instead of the horse's head. However, she could gallop well, and passed the fastest horses present, even a powerful horse three inches taller, with only about 7-lbs. in my favour.

On the shore of the Lake, there has lately been erected a large and handsome elevator, used as a store house for the corn grown in the district, also of that brought down by the Canadian Northern Railway, which runs from Toronto Northwards to Lake Simcoe. The Great Western of Canada (as well as the Northern), joins the Grand Trunk at Toronto. The Great Western runs from Toronto South Westward, round the end of Lake Ontario, to Hamilton, a port at the Western end of the Lake, not far from the mouth of the Niagara river, in the course of which the Great Falls occur. From Hamilton the Great Western runs to Clifton House Station, at Niagara Falls. About one and a half miles below the Falls, the Niagara river is crossed by an iron suspension bridge, which stretches from bank to bank, 800 yards long and nearly 250 feet above the water, having a roadway under the railway. One end of the bridge is in Canada and the other in the United States, and custom's officers are stationed at either end to endeavour to prevent smuggling.

There are two Waterfalls: the Horse-shoe or Canadian Fall, by far the larger of the two, which is almost exactly in the course of the river, where the water is 15 feet thick, and the American Fall, which is almost at right angles to the Horse-shoe Fall, where the water is much shallower, but the Fall is a few feet higher. This Fall is separated from the other by an island, called Goat island, round the back of which the waters flow on their way to the American Fall. The American Fall is 300 yards and the Horse-shoe 700 yards across. The Falls join together with a tremendous roar, in

a seething cauldron, nearly 200 feet below the perpendicular banks, and create several columns of spray, one of which, between the two Falls, rises like a feathery fountain about the level of the banks. The Horse-shoe Fall is twelve miles from where the Niagara river joins Lake Ontario; the angle of the Horse-shoe has become more acute of late years, shewing that the current of water wears away the bed of the river gradually. It is stated that the Fall originally fell direct into Lake Ontario, now over twelve miles away; and that if the annual wear of the bed of the river could be known, the age of the Planet on which we live could be calculated to a certainty; but as the annual wear has only been observed a few years, no reliable data exist at present.

The distance from Lake Erie to Lake Ontario is thirty six miles, viz., twenty four from Buffalo to the Falls, and twelve miles thence to Lake Ontario. The Welland Canal joins the two Lakes on the Canadian side.

A path and steps lead down the bank and extend underneath the waters of the Horse-shoe Fall. It is very wet and rather dingy underneath the Fall, and, except that you are close to a rapidly falling, roaring mass of water and foam, fifteen feet thick, which conveys a great impression of the enormous powers of nature, there is very little to see. The town on the American side is called Suspension Bridge, and chiefly consists of Hotels, frequented by citizens of the United States, who consider it a duty to visit the Falls, at least once or twice during their lives.

A ferry a short distance below the Falls, which is worked by a little steamer, enables you to cross close to the foam. The wish of all on board, when they find themselves in the middle of the river close to the foaming roaring torrents, is that the machinery of the steamer may not break down while they are on board or the

boat would certainly be driven down the rapids between the Falls and the Suspension Bridge and neither steamer or passengers would ever be seen again. The weight of the water where the falling mass strikes the river below is so great that floating articles such as wood which might come over the Falls would not float but remain below the surface. A little below the Suspension Bridge the Niagara River narrows and the crush of waters is so great that the level of the centre of the river is 5 ft. or more higher than the level of the water at the shores, this phenomenon illustrates the mathematical principle of a sphere containing more matter than any other form and also shows the tendency of large bodies of water to assume a spherical form in the same manner as small portions which will often run across a tray or other smooth surface, in globules instead of in a stream. An American, who was conducting his family and a party of friends along the south bank at the river level, (the high banks fall away below the bridge and allow a narrow shore to exist at their feet) and who seemed to consider that he could account for all the peculiar features of nature, when asked why the banks had narrowed at the point where the centre level was higher than the sides, explained the matter as follows: "Why, you see, this occurred at the time of the Flood when there was clearly less water to run over and therefore less width was sufficient." Those who heard the explanation laughed and clapped their hands and one of them asked "Well then, if it has taken ever since the flood to wear away two miles of the river bed, how many years did it require to wear away the other 10 miles?" This sounded like a poser, but the Yankee was equal to the occasion and replied "That at the moment he had not either time or sufficient material (pulling a piece of newspaper out of his pocket) to fit up and run out the

"necessar" calculations, but he intended to take up the "matter on his return home." The true cause, is I believe that the rocks of the banks were harder at this particular place and the soil above them on the surface was thinner so that the water had only rock to wear away.

The geography I learnt from at my first school said that boats could not descend the Fall without destruction but that the natives came over with impunity in their canoes. I learn that two or three canoes are related to have come over, but that neither canoes nor occupants were ever seen again. That geography ought to be revised.

I made a trip to Buffalo, which is about 24 miles west of here, per rail over the Suspension Bridge. Buffalo is situated at the entrance of the Niagara river, opposite to Fort Erie, a small town on the Canadian side of the river, where Lake Erie ends and whence its waters proceed down the Niagara river and over the Falls to Niagara, and there join Lake Ontario. Buffalo is the second city in the State of New York, and is situated at exactly that point of the Empire State most distant from the great commercial capital of New York which is on the Hudson, the opposite side being Jersey City, in the State of New Jersey, and Brooklyn in the State of Long Island. The Delaware and Hudson Canal which joins the waters of Lake Erie to those of the Hudson river commences at Buffalo. The Canal and the Railway run parallel, or nearly so, from Albany, on the Hudson, 150 miles above New York, to Rochester, a distance of 230 miles. Rochester is on the Genessee river, 7 miles from where it falls into Lake Ontario. The Falls there are three in number, and are 96, 25 and 84 feet in height, to which must be added the rapids, making the total over 250 feet fall in 7 miles.

Rochester owes its manufacturing eminence to the

enormous water power of the Genessee. The Erie Canal is carried across the Genessee in a cut stone aqueduct, 848 feet long and 45 feet wide. Near Schenectady, 17 miles from Albany, the Troy and Albany branches of the New York Central Railway join and run on for 130 miles to Syracuse in one line, then separate again and rejoin a second time at Rochester, 80 miles further on. The Southern line goes via Auburn and Canandaigua, and the Northern one crosses the Mohawk River and Erie Canal, one a bridge 1000 feet long. At Little Falls, nearly 100 miles from Albany, the Canal and Railway pass through a grand and difficult defile. The scenery of the winding Canal with its locks and of the River with several rapids and several cascades, is most remarkable.

But to return to Buffalo. It is a very fine city with above five miles of wharf frontage, fine avenues and a beautiful parks. It has become prosperous since the Canal to New York was completed in 1825. The Canal competes with the New York Central and Erie Railroads in carrying wheat, &c., down to New York, to be shipped on board the large transatlantic steamers of the Cunard, Inman and other lines for Liverpool and other places. Elevators, Breweries with Malting houses, are numerous. Corn does not travel in America in sacks, it goes in bulk both in the railroad goods trucks and also in the lake sailing and steam vessels and on the canal boats. The corn is taken at, say Chicago, into an Elevator, or rather I should say sucked up by one of the spouts, which act with buckets on a continuous band or chain, like dredgers; it goes into an enormous floor and is mixed with another lot, or many other lots of the same quality. The qualities are Nos. 1, 2 and 3, and the person delivering receives a receipt for so many quarters (of 480 lbs. each) of No. 1, 2 or 3 wheat. This order is like a Warrant and can be sold at New York. The buyer

would present it at New York and be entitled to an equal number of quarters of the same quality. The chance of his getting any of the same wheat would be, I should suppose, very small, and not easily estimated.

An Elevator has a number of sucking arms and delivering spouts, which extend themselves in various directions, according to the situations of the wharves or the railways. One can only compare an Elevator to that ugly and greedy fish, called Octopus, which has various tubes all round it, except that an Elevator would be more properly a sex decemopus, or vignit-opus; that is, that it has 16 or 20 arms instead of 8.

The ground rises from where the canal basins are, as also one or two large Ironworks, to where the Dépôts and enormous Freight yards of the various Railways are, and which seem to run in every direction. Part of the river bank is 50 or 60 feet above the water, and affords very good views of the Lake, the City, and the Niagara river, with its waters rolling on regardless, because perhaps unconscious, of the big tumble they will get within 25 miles. Fort Erie and the Canada side, with the Buffalo and Lake Huron Railway Dépôt are quite visible. The Public Park or rather Parks, the Cemetery, and the grounds of the Lunatic Asylum are all laid out together, and joined together by handsome tree planted Avenues; giving, I was told, a continuous drive of 10 miles or more. This story looks to me to have been invented by an inmate of the last named Institution. There are some squares with trees (squares are unusual in American Cities) but they give quite a cheerful look to the place, and reminded me of Ladbroke square; but there were no boys playing rounders therein, nor caulking ball. The children don't seem to move on their legs as fast as boys in England, nor do they seem to care for active outdoor games; perhaps the dryness and heat of the

atmosphere is against them. Cricket seems to be in its infancy, but commencing. I have been cross-examined by men, women and children on the subject several times, as soon as they find out I come from the Old Country. Except in the Western and Backwood States, the men don't know much about riding. Many are practising for War purposes. Some one has invented a saddle for military purposes, which certainly seems appropriate. The horse man folds up his blanket into eight thicknesses, puts it on his horse's back like a saddle cloth, then places the saddle across and buckles the twisted string or hemp girths underneath. The saddle consists of a thick piece of wood, the shape of the centre and half of either side of a saddle; this wood has a large long cavity underneath from front to back, which shews daylight through, except for 2 inches in front and back. A leather flap is nailed on to either side, from under which the stirrups come. The wood is covered sometimes with a piece of leather, sometimes not. The effect is that the folded blanket squeezes itself up into the groove above the horse's backbone, so that a very slack girthing will prevent the saddle turning. It is also said that the thick cloth prevents sore backs.

I returned by the late train to Niagara Falls and crossed the Suspension Bridge by moonlight. The roar of the Falls and the indistinctness of the spray and foam 250 feet down below made everything impressively mysterious and grander than by sunlight.

On the following day, several of the guests at the Clifton House, arranged an excursion along the Great Western line to Niagara, the town at the mouth of that river on Lake Ontario; the line runs parallel, or nearly so, to the Welland Canal. Near Niagara is a monument rather resembling Nelson's Column, erected to the memory of Sir Isaac Brock, who commanded in 1812,

on the occasion of a battle with the Americans; the gallant General beat them but fell in the fight, which was a heavy one. It is rather curious that the monument at Quebec, about 600 miles off, should celebrate another great battle; also the fall of the leaders on either side, Wolf and Montcalm. The struggles must clearly have been very serious and contested with great determination, for both generals to be killed.

I purpose leaving to-morrow, via the Great Western Railway to Paris, and thence, via Buffalo and Lake Huron, to Stratford where it crosses the Grand Trunk line, and thence along the latter to Sarnia, a Lake Port at the head of the Detroit river, or rather strait, where it leaves Lake Huron.

From Sarnia I purpose going, per steamer to Milwaukee, in Wisconsin, and thence, per rail, to Chicago, in Illinois.

I am now restored to first-rate condition, and have enjoyed my stay at and my trips near the Falls very much,

Yours, &c.,

W. T. N.

ON BOARD THE PROPELLOR, WABASH,
MIDDLE OF LAKE MICHIGAN OR THEREABOUTS,
20th July, 1864.

MY DEAR FATHER,

Since writing to you from "the Falls," I came on to Sarnia, as described therein. Sarnia is at the head of the St. Clair River, where it leaves Lake Huron; Sarnia is the Western end of the Canadian portion of the G.T.R., where that line crosses over to

Port Huron in Michigan, by means of a large ferry boat, which carries the cars across bodily, about twelve at a time, and proceeds thence, about 50 miles sou'-west to Detroit, where it joins the Michigan Central. Except the railway arrangements and some harbour accommodation, there is nothing at Sarnia.

I embarked on board this boat for Milwaukee, in Wisconsin, 85 miles north of Chicago.

Before leaving Niagara Falls some curious events happened, illustrative of the feelings and tastes of the darkies. In Western Canada, many of the waiters, cooks, hotel boots and porters, also the hair-dressers and barbers are darkies; that is, negroes or descendants of negroes, who escaped across the United States frontier before the War and thus obtained their freedom under the English Flag. They are probably superior to the ordinary run of negroes that one meets in the States, following similar occupations. They are mostly quiet, well-behaved, and industriously endeavour to earn a living. In the States the northern Yankees, although they denounce slavery (often I believe quite insincerely) they treat the darkies as if they were dirt; speak to them, swear at them, and abuse them in the loudest and coarsest terms; but Englishmen, especially those who are educated, actuated by the national sentiment of freedom, are much more civil and sympathetic, especially with the darkies in Canada, whom they presume, have, either themselves or their parents, had the courage to run great risks in order to secure their freedom. At the Clifton House there was a three-fourths dark youth, who was boots and assistant generally on the 2nd floor, where my bed room was situated. He was most assiduous in my case, polished my boots till I could see myself in them, brushed my clothes most thoroughly and wrapped them up very neatly. I was always very civil to him. Two long vul-

gar Yankees, who lodged on the same floor, who were continually expectorating, both in the rooms as they sat and on the staircase and corridors as they moved about, treated him very differently; they always addressed him with an oath, abused him outrageously, if he did not fetch them cocktails in an impossible short time; said he was the son of a —, calling his mother by an unmentionable name, and when he contradicted this statement, threatened to thrash him. On one occasion he was going along the corridor with some baggage, when one of them shoved him roughly in passing, telling him that niggers should get out of the way. The action and assertion were quite uncalled for, as he was so close to one wall that a large bag in his hand touched it. I mentioned the matter at the office as I passed through the hall; the clerk took a note of the facts and said that he would inform the "boss" on his return, but he was out at present. However, on the day we went to Niagara, the matter came to a crisis, several complaints were lodged as to the filthy manners and disgusting language of the Yankees; so the landlord told them to pack up and clear out. They met this request with a volley of disgusting abuse, went upstairs, rang their bell and ordered some liquor. Sambo brought down the order and was told not to fulfil it, but wait for the Landlord, who would serve them himself with the bill and have short payment. The account had already been made out, and the Landlord taking the precaution to have his revolver with him, called one of the waiters and went up, accompanied by the waiter and Sambo. Sambo, who apparently foresaw a difficulty, ran up first and got a stick out of a neighbouring room, and was ready for his portly master before the latter had mounted two flights. The waiter knocked at the door. A voice answers, "Who's there." Reply, "Waiter." The door opened, the waiter entered, followed by the Landlord. The

Yankee asked the waiter "Where's the liquor?" The Landlord replied that nothing would be served, until the bill was paid and handed in the bill. The younger man on seeing it said, "Oh! golly, here's a bill." There were no signs of packing up. There were three packages in the room, one bag, one bundle and one small bag. The younger man shewed the bill to the elder man, who asked the Landlord, "What do you mean by this." "I mean to be paid straight off and have you both out, or all my guests will leave me." "I ain't got the money," said the younger man. "Guess I sharn't pay this, nor leave till to-morrow," said the elder man. "Yes you will," said the Landlord, "or be turned out without your baggage, and handed over to the police as swindlers." "No fear," said the fellow, insolently, "Guess I'll go when and where I choose." "Certainly," said the Landlord, "after paying the bill." Sambo had followed the Landlord in and was standing close to him, a little to the rear. "You clear out, you lubbers," said the elder man, in a rough tone, "or I'll make ye." "No you won't," retorted the Landlord, and put his hand in his pocket for his revolver. The elder man fidgetted with his hand near his trousers. Sambo's quick eyes understood the movement; he said, in low tone, to his master, "He got 'volver massa," adding, "me hit him massa," and shaking the stick. The master nodded, or did not object, probably the latter; so Sambo started out, without more ado, sprang forward and struck the second Yankee a severe blow with the stick, across the hand which was in, or partly in, the pistol pocket. The man pulled out his hand with the revolver in it, with a cry of pain. Sambo visited the knuckles and fingers with another sharp blow, which caused the revolver to fall out of the man's hand. Sambo pounced down on the revolver and got it before the Yankee could get it, and presented it at him. "Me 'volver, Yankee."

"Me trash Yankee. Yankee no trash Sambo." The Landlord called out to Sambo to come back to him and give him the revolver. Sambo obeyed, with a rather disappointed look. The elder Yankee had gone towards the basin to bathe his hand which was bleeding. Sambo volunteered to his master, "Me trash udder Yankee, make him hab dollar," and not being forbidden, dashed at the younger Yankee savagely, and struck him two sounding blows, exclaiming, "You call mudder bad name." The Landlord told the Waiter to stop Sambo; and to divert the latter told him to go for two policemen. Sambo obeyed promptly, but halted a moment at the door. "Me pay Yankee out. Yankee call mudder bad name." He handed the waiter the stick, with the recommendation, "Good 'tick, you trash Yankee, make Yankee hab dollar," and departed.

Matters looked bad for the Yankees, so the younger called to the elder, "I say Gid (for Gideon) just fork out and let's be off before the kopers come" (koper is a slang name it seems for policeman). "You fork our yoursel," replied the other, "I've got my hand broke up all thro' you."

"Here gov'nor," said the younger, "here is all I have," handing the Landlord a few dollars in notes and diving into his pocket and producing some change. The Landlord and Waiter looked at the notes and declared the amount to be not nearly one-half. The Yankee had tried to take up one of the bags, and was just going through the door when the Landlord went after him; the Yankee seemed inclined to run, when the Landlord called out "Sambo! Sambo!" loudly. "All reet, Massa," replied the voice from the bottom of the stairs. "Me got gentlemen, dey come with ring and chain." The Yankee dashed down one flight just as Sambo reached the landing. "You no escape, Yankee," cried Sambo, and rushed

at the man and tore the bag out of his hand, and swung it round with a blow on the man's head; the bag, Sambo not having a good hold of it, flew over the banisters and went crash into the Entrance Hall below. "Oh! my poor bag," said the Yankce, who stooped in order to pick up his wide-a-wake and stood himself against the wall. "You find dollar" called out Sambo. "Yes, you had better," chimed in the Landlord, coming down the stairs, with a revolver in either hand. The Yankee looked sullen, moved one of his hands up a little and then put it down again. "He got dollar, Massa," called out Sambo. Sambo was right, and the man in desperation pulled out some more notes, threw them down and made a rush downstairs, "Top him," called Sambo, but the crowd of servants, &c., collected by the row was too great to get through easily, especially as the Landlord's wife urged them also to stop him. He halted six or seven steps from the bottom. Sambo came down to him and stood guard. The Landlord counted the notes and found them equal to more than one-half the bill, so said "Let him go, but keep the bag." Sambo repeated the order, "You go, Yankee, but no bag." The Yankee seemed inclined to strike Sambo for his persistent hostility, but his courage failed him and he went on. "Good bye, Yankee," said Sambo, giving the Yankee a tremendous kick, exclaiming, "Dat's from mudder, Yankee, Ah! Ah! Ah! Me pay Yankee, call mudder bad name." The man limped out amid the jeers and hisses of the crowd. The other one upstairs had been, it seems, advised by the waiter to square up, or he would likely get six months; so he squared up nearly the whole bill, the waiter giving him credit for the notes first received. He came down with the bag and the waiter with the bundle; the money was handed to the Landlord on the stairs. As he crossed the Entrance Hall he observed the other bag, and said

"That's my bag," and looking round said, "Where's Sam," meaning the other Yankee. "Oh! I'm Sambo," said Sambo, "Want me some more." This raised a general laugh, with "Well done! Sambo." The man stooped to pick up the bag and dropped it, as his hand would not hold it, as it fell it rattled. "Why they're all broke," and hesitated. Some one suggested, "You had better be moving or you'll be broke too." The Boots got orders to take the bundle and the bag, and the elder Yankee departed, very melancholy and probably a wiser man. The Landlord lost nothing, there were several dollars over, and a lot of liquor was consumed by the curious who came to enquire into the disturbance.

Sambo got a present of a dollar or two and went home to his "mudder," with leave of absence till next morning. Sambo put on his straw hat, stowed away the notes and departed, taking the stick from the Waiter. "Me go shares with mudder, fader always did."

The next morning Sambo turned up, and contrary to the predictions of some of the people, was quite sober. My boots (which were very dirty from climbing up to see the Brock Monument) came nearly as bright as usual, and he brought the stick with which he had operated the day before, with lengthy explanations about his taking it, and hope "I would not be wild." The stick was a good sound piece of Canada Oak, which I had acquired during the hot weather in Montreal. Sambo had rubbed it up. He handed it to me, but I was not wild and told him he might keep it as a memorial of his exploits. His bronze face beamed with delight, but he rather hesitated; so I told him I had another one, so that if he took it we should have one each. This argument relieved his mind, so with voluminous and very ungrammatical thanks he departed with my clothes to clean up and get the mud off. While packing up just before leaving, I wanted the

clothes and rang; the door opened as soon as I had rung, and in came Sambo, very much out of breath, with the clothes. It seemed he had found a loose button and the sleeve lining torn in the scye of the sleeve and had run with them to his "mudder" to mend, and then run back again. We packed up most things, and I tendered him a half dollar, but could get nothing out of him but shakes of the head, as he stood with both hands behind his back. No tank, massa too good, was his opinion; so he went. I was much struck with his abnegation, especially as the Free Negroes generally in the States, are very careless and thriftless; dance and sing, and get drunk in Summer on Rum, when they have the money, and then in Winter often die of hunger and cold at the street corners. There is no Poor Law and Yankees don't give away alms, the reason being, that as there is plenty of work anyone can earn enough to live on, they must take the consequences of their own wastefulness. It suddenly occurred to me that I had, among some neckties in the Portmanteau, a red and white silk striped tie; the colours were the Danish colours, and the tie had been purchased to wear on the occasion of the entry of the Princess Alexandra, on the 7th March, 1863, and had never been worn but once afterwards. I got the tie and rang; Sambo appeared quickly, so to prevent any discussion I put it round his neck and knotted it, told him to tuck the end in and have a peep in the glass. Sambo's face with a smile of delight, shewing all his teeth, was a picture. "Must tuck in the ends?" enquired Sambo, whose view was in favour of shewing the whole. I did not like to thwart him, so I said "Take your choice, and mind it's only to be worn on Sundays. Come take the portmanteau down." He and the portmanteau went. I finished strapping the rugs up and then followed. As I walked along the corridor toward the staircase, I heard a great

laughing, giggling and roaring somewhere downstairs, and on looking over, I saw Sambo about six steps from the bottom, surrounded above and below by a crowd of dark faces, housemaids above, cooks, waiters and helpers below, all in ecstasies over the tie, and roaring and giggling. I went down, they allowed me to pass; at the bottom I met the Landlord, looking rather cross. He remarked, "I don't like to be cross with him after yesterday, but the whole place will be stopped." I thought a moment, how to get out of the difficulty, and remembering Sambo's love for his mother, suggested to the Landlord; "Tell him to go and shew it to his mother and leave it with her to be worn only on Sunday afternoons." This was done, Sambo departed and the darkies returned to their duties.

I proceeded to pay my account at the office; the Landlady who was present, reminded, or rather told, the Landlord that she had heard that it was my stick which Sambo had used the day before with such effect. "Dear me," said her husband, "I wondered where he got a stick so soon and intended to ask him, but forgot to ask him in the excitement. I have to thank your stick for its effective protection, yesterday; I hope you have got it all right." "It's all right," I replied, "but I have not got it, as I gave it to Sambo. You may depend upon it Sambo will use it for your protection whenever required." "I dare say he will; he is a very nice lad and I'll make him a waiter for his courage and quickness; but you see them poor darkies got so larruped down South, that thrashing is the chief idea in their heads. You seem to like him too." "Well, yes, he got the tie because he declined a half dollar I offered him as a fee in the usual way." "Dear me, that's very curious, darkies don't usually do that, but he is not quite black; his story is a romantic one. His father, a fine looking negro, but not tall,

and his mother (a mulatto) were slaves on the same estate, down Kentucky. They were sweet on each other. It seems that the mulatto girl was to have been a house servant, which you perhaps don't know means that if she took the fancy of her owner, or any member of his family, she would be converted into a concubine. The Overseer or slave driver, a man of brutal character, also admired her, and when he heard this, he took an opportunity of assaulting her when she was out one evening; she screamed and resisted. Sambo's father, with whom she had a meeting near by, and who was lying in wait hidden, overheard and rushed out with a stake and struck the Overseer on the head, which rendered him helpless for awhile. The mother jumped up delighted. It seems that the Overseer had given her some money a little while before. She did not wish to become a house servant, her own mother having been one before her, (hence her mulatto complexion), and she had been sent up to the quarters at the Owner's house two days before and got out on the excuse of fetching some of her clothes; hence the assault of the Overseer, who saw his money gone without value. It seems that she had put together a scheme of escape and had used the money in a gown, and had altered and lengthened another ready for Sambo's father, to convert him into a woman, she being as tall as he, and she wanted to see him to put the scheme into execution. It seems likely that the Overseer had had her watched, and had endeavoured to snatch the last chance but luckily failed. Sambo's father tied the man's hands behind his back, and they left him. She told him that she had the bundle with her, these were the clothes she went after, as until she found out what the house quarters were like, she had left them at the slaves' hut. They immediately made tracks, and after some miles went into a wood, where the man was dressed up and

she stained her face to the same tint as his ; his clothes were abandoned, and both having some money with them, for he carried about the little he had got by having been hired out to another planter the previous year, they went on. Only one point was deficient and that was that his shoes were not feminine ; they tried to exchange but that did not act, so when they arrived at a place some distance off, she bought a second but larger pair for herself. The bootmaker was it seems suspicious, and asked where they came from ; she replied, giving the name of an estate not far from the real one ; the bootmaker thought it rather far off, but getting an answer that she was going along with her mistress home, and should not be back so far as to come to that shop for shoes for a long time. The shoes were rather a tight fit but did, and the couple pursued their course on foot, by byeways, living on corn they picked till they came to a larger town on the Ohio. Here they wisely stopped a time ; she got some employment and he kept house, cooked, &c. While here they heard of an advertisement for a man and a mulatto woman, run away from a certain estate, with a reward. Of course, if they had been caught, the man would have been larrupped, or cowhided almost to death. However, they kept quiet until the matter was rather stale, and other similar advertisements had appeared. They again started, having picked up in condition, crossed the Ohio and went on North. The time was harvest and labour was wanted. She worked a few days to get money enough to buy him some male clothing, and then he got work, and working hard for some weeks fell ill ; so leaving off they started again, and gradually walked from stage to stage ; stopped and took jobs, generally apart, as they were now more like the advertisement ; he became again ill, so they took steamer, he acting invalid, with a large handkerchief over part of his

face and she as his sister, and succeeded in reaching the large town, stopped; she got work, he got better and work too, and they remained some while, when the harvest being nearly over, it was necessary to make the last effort to get over the frontier. They reached the neighbourhood of Buffalo, and a fisherman on the banks seemed to guess what they wanted, and offered to put them on the Canadian side in his boat, pointing out the boat. They said that they were seeking work. He offered to take them for \$10, which was much more than they had left. So they went away, waited till dark, and then went down to where the man had pointed out the boat, drew out the fastening and trusted to Providence to take them safely across the Niagara river. They got ashore safely, attached the boat and were free. The boat was of course looked for, and was returned; but the two passengers had moved off and were quietly at a little Inn. Here the man resumed the female costume, and they moved further off with their scanty baggage. He obtained work and got better; she got washing, and what we should call charring. They got married; soon after which they were taken on by an old farmer; she as house servant, he as farm man. The old farmer, with whom they remained several years, greatly sympathised with their perseverance and when he died he left them a little money; they then came to Niagara with their baby, Sambo, three years old, and set up a barbers and tobacco shop, (the man having had to do with the cultivation of tobacco in Kentucky); the shop did pretty well, until the bad times in 1857, when she took a cook's place in a Commercial Hotel and afterwards came here, and when her husband died, three years or so ago, she left here, disposed of the tobacco and barber's shop, and having the promise of the work here, set up as a laundress and has been very successful. She brought

Sambo here nine months ago, and he having been well brought up I took him and he has done very well, and I shall be glad to push him on."

This is the Landlord's story of Sambo, which, if I had not been on board a rather slow plodding propeller, I should scarcely have found time to narrate.

The Propeller, which means screw steamer, left Sarnia in the evening and passed Saginaw Bay during the night. Cape Hurd, where the entrance to Georgian Bay is, which goes Eastward nearly as far as Lake Simcoe, was just visible early next morning. Next came the Island of Great Manitoulin and Drummond Isle, where the River St. Mary debouches, having come from Sault St. Marie, at the South-western corner of Lake Superior. This river forms the means of access and egress to and from that enormous Lake, the last and largest of the five great Lakes, (Ontario, Erie, Huron, Michigan and Superior.) It is as large as Huron and Michigan put together. It affords water access to a region as yet but little settled. The land on the Northern shore and at the Western end is in British North America, and the irregular Southern shore in Michigan and Wisconsin. Great things are said of the beauty and fertility of the region, and it is predicted, that within ten or fifteen years or so, the Lake Superior Region and the Red River Country beyond it, will "be great in the corn line."

After passing the straits of Mackinaw, we entered Lake Michigan and started to return South, having up to this time come North and West.

After going a short distance South, Wisconsin is on the right or Western side of Lake Michigan and Michigan opposite. Something happened to the bearings of the crank-shaft, and they eased and a halt of some hours was made in the middle of the Lake. As the Propeller was provided with only one mast (the foremast) which

possessed a sail, the position in case of bad weather might have become serious. On Lakes Erie and Huron, especially the latter, the vessels are entirely out of sight of land for sometime. The bearings having been cooled by the application of a large quantity of Lake water, which is very nice and cool, the Propellor proceeded. After passing the Straits, we had passed several Islands, called Manitou, and the Steamer halted at a small place in the largest Island, named Manitout. These Islands are opposite the entrance of a long Bay, called Green Bay, which runs southerly, almost parallel to the Lake. Somewhat further South, and connected with the Bay by a river, is a Lake called Winnebago, and in this neighbourhood is a considerable settlement of Bohemians. This was the district to which a number of the unfortunate emigrants, who came to grief at the Richelieu, in May last, were coming. I wonder how they are getting on?

On the Michigan side, nearly opposite to Milwaukee, is a Port called Grand Haven. A Railroad connected with the Great Western of Canada, runs from Detroit to this place, and connects with Milwaukee by means of steamers across the Lake. As Milwaukee Harbour, at the mouth of a river of the same name, is now in sight, I must close this letter so as to post it on landing.

Yours, &c.,
W. T. N.

WALKER HOUSE, MILWAUKEE,
22nd July, 1864.

MY DEAR FATHER,

On my arrival here, two days ago, I posted the letter written on board the Wabash, which was only a poor sort of boat, of about 180 tons, and made a very slow passage. There were about 27 passengers on board, our berths were limited and so was the diet, but there were facilities for increasing the latter by purchases of the Steward.

Milwaukee is built on the rising ground, dissected, or rather trisected by the river, and another called the Minowonee, and is I think the prettiest town I have yet seen. Handsome wide streets. The three divisions are the East, West and South. The Harbour is the best on Lake Michigan.

The Milwaukee and St. Paul's Rail Road, which runs 760 miles to St. Paul, in Minnesota, has its head quarters here and I went to present my introduction to the Chief Ticket, that is the Traffic Manager, Mr. T——. I found him a most intelligent man and delighted to see a Britisher. Now that one is well out West the hospitality of the inhabitants increases. He invited me to dinner for the following day, yesterday Sunday. On Saturday evening I wandered during the long daylight evening round about the Harbour and Town. The bricks of which the houses are built are cream colour, and the City has been christened "the Cream City of the Lakes," if the title were made the "Cream of the Cities of the Lakes," it would be equally deserved.

After going to Church yesterday morning, I walked out to the suburb on the Eastern side, which is built on high ground overlooking the Lake. I found the Chief Ticket's house, also the gentleman himself, his wife and

three nice looking children ; a boy, fourteen years old, and two girls younger.

The Chief Ticket is like his office, neat and accurate in appearance ; his wife is like her husband, only rather less precise ; the children also neat, and they behaved at dinner very quietly for American children. Did not contradict their parents and insist of having everything they fancied, utterly ignoring their father and mother, as is the custom in New York. I was asked various questions, as to where I had been, and when they learned that I had been some time in Montreal, I was asked if I were there when the Emigrant Railway Accident occurred. I replied in the affirmative, whereupon the Chief Ticket detailed a fairly accurate account of the accident. I enquired how he got hold of it. To which he replied, "Oh ! from several of the German and Bohemian Emigrants, who stopped when in Milwaukee to rest, on their way to the district near the Winnebago Lake." The wife then added some further details, about a widow who came on later with her husband and baby ; the husband had been a good deal shaken and bruised, and she had had the baby at Montreal. I began to wonder what next and listened intently, so she continued, that the baby was born at the Depot shortly after the accident ; that the woman, who was with her husband in a shed, with a large number of other emigrants who had not been taken to the Hospital, was removed by direction of a youngish man who spoke German, and who told her that she would be taken care of, that a doctor and a nurse were coming, &c. She had been very kindly treated, supplied with linen and good food. She came away about three weeks afterwards ; her husband being quite better, and having received some money for loss of baggage, which had gone into the river. The young German visited her several times with the Doctor, and

interpreted. Another baby had also been born, but did not live. She thought the young man was a doctor, but on the Sunday, her husband told her that, at the prayers in the shed, the young man preached the sermon. I enquired if she told his name. Mr. T., she said something like *Neemich*. I replied that sounds like a German name. I was asked questions by the "T," as to where I had been born and educated; whether I had been in France and Germany, and as to whether I spoke French; to all of which I replied in the affirmative. Mrs. C. T. added quickly "And German?" "Yes," was the answer. "Did I speak it now?" "Yes," I answered. So she started in German and enquired whether I could preach a sermon; I replied, "*Das wäre etwas schweriges*." Did I know what the text had been? I asked, "Why do you ask me that question?" "Never mind, just tell me." "Well perhaps I do." "And you saw the Emigrants, Ja, and the shed, Ja;" this was all in German. She went on rapidly, "Did you see the Emigrants in the Hospital, Ja. Did they get mixed?" "Not as to sexes," I answered. "I don't mean that, I mean religions, Ja." Her husband, who did not understand German, had risen and was standing at the window. She jumped up and went to him and said, pointing at me, "I believe that is the *Herr Neemich*, what's his name." My name was repeated. "Oh! that's quite near enough. Well I never, I've found him out. He would not confess that he preached the sermon when the German Parson wouldn't come." "Who told you that?" "Oh! the woman's husband." They stopped here some days, and I looked after the woman and baby and talked German to her. Well! She was fortunate to fall into such good hands.

The Chief Ticket turned round, knocked the ashes off his cigar, and said in a grave tone, "Then you are the young German who took part on the occasion of the accident." My answer, "I am certainly the young man

who took part, but I am not a German." "But how could you preach a sermon?" "Well, because I had been five months in Germany, at Gotha, to learn the language."

I have heard several accounts of the case, what was the mixing of the religions. Well the case was this, the number of wounded requiring immediate accommodation, was greater than either the General Hospital or the Hotel Dieu could take, so they were to be sent to both. The two members of the German Society, who went down with the Mayor to Beloeuil, to the site of the accident, raised the question of separation by religion, which was unwisely assented to and created a great deal of bother afterwards. How were they separated. Well, I used a crucifix, which came off the neck of one of those who were killed; simply by holding it before the Emigrants, it was easy to see whether they tried to cross themselves or merely bowed, also, whether they used Latin or German invocations. "Well, my good young Sir," said the Chief Ticket, coming across and squeezing my fingers with both hands, "I beg to congratulate you on your conduct, on the occasion;" and, looking with a father's fond look at his only son, hoped that his son would manifest equal vigour and courage if an opportunity occurred. I was rather depressed for the rest of the evening, at the whole of the painful story being trotted out. I tried to turn the subject, and luckily tea was announced, after which I suggested Church; so the father, the boy and myself went to a Church, where the psalmody was pretty well done. I joined in the chants and hymns. The father wanted to know where I had learnt to sing. I replied "King's College Chapel." "Dear me, what advantages you young Englishmen have. How do they sing in English Churches? Is it paid for?" I explained that the Organist and Bellows Blower had to be paid, the latter

without exception; but that the Choirs were often voluntary and composed of young men, sons of members of the congregation, who met to practice once or twice during the week under the Organist, and then sung on the Sundays. "What a nice arrangement," said the Chief Ticket, "and very improving to those who sing." I now wished him good night, but he insisted that I must come back to supper. I had to go, but got off soon after; wishing his wife good bye, by pleading that I liked to go to bed early on the Day of Rest.

In this Hotel out West, the waiters have all become waitresses, which shews that male labour is in great demand, and there being no textile manufactures, in which women would be required, they get employed in situations in which men are usually to be found.

I go off to Chicago, 85 miles South of here, in an hour

Yours, &c.,

W. T. N.

TREMONT HOUSE, CHICAGO,
July, 1864.

MY DEAR FATHER,

I arrived two days ago at this great Western Food Centre from Milwaukee. The trains on the Chicago and the North Western Rail Road do their 85 miles under three hours, which is quick for a Western Rail Road. On the way the train passes Racine, the City which ranks next after Milwaukee in the State of Wisconsin. The situation is somewhat similar to that of Milwaukee, but prettier; a river called Root River, runs into the Lake Michigan, the town being on a plateau nearly 50-feet above the Lake. Milwaukee and

Racine seem to me to be the most charmingly situated and most healthy in appearance of all the Lake Towns. Buffalo is a fine place, but depends a good deal on its size for its good looks, and its canals and wharves, and its parks.

Chicago is a fine place and full of handsome buildings, and is situated on a peculiarly formed piece of land in the northern corner of the State of Illinois, where that State touches Lake Michigan for a short distance only. There is a river called Chicago, hence the name of the City; but this river is only a rivulet or creek of the Lake, it extends about half a mile inland and then splits into two branches, each of which runs about two miles in opposite directions, North and South, parallel to the Lake. This peculiar natural dock-like formation, gave exceptional facilities for loading vessels cheaply. The land was low and to a considerable extent swampy, and was often overflowed by the Lake when there were freshets; and to overcome this evil, the streets and buildings have been raised bodily some nine or ten feet. A canal leads from the South branch of the Chicago to La Salle on the Illinois river, a tributary of the Mississippi. This river flows through an extensive corn growing district.

Chicago stands just at the extremity of the watershed, which separates the vast basins of the St. Lawrence and the Mississippi; which situation has, no doubt, together with the natural dock accommodation and the La Salle canal, tended to bring the wheat, maize, flour and other breadstuffs to this extreme point of Lake Michigan, where water conveyance could be found, and the produce taken cheaply, either direct to Montreal; or to Buffalo to go by the canal to New York, for shipment to Europe.

The small depth of water in some of the St. Lawrence canals, seems to have tended to divert the traffic to Buffalo. The country, for a hundred miles or more around here, is prairie land.

There are several large Railway Depots, used by the numerous lines which come here. There is the (1) Chicago and North Western, which is really the Chicago, Milwaukee and St. Paul; then (2) the Michigan Central to Detroit; (3) the Michigan Southern and Lake Shore to Buffalo; (4) the Pittsburg, Fort Wagne and Chicago; (5) the Illinois Central; (6) the Chicago and St. Louis, a line, via Springfield (the political capital) and Alton, near where the Missouri river joins the Mississippi, to St. Louis; (7) the Burlington and Quincy, and (8) the Rock Island Railway. The four last mentioned lines bring in the breadstuffs to be sent East, either by the Lake Propellers, or by the lines 2, 3 and 4.

It is said that a more direct line, between New York and Chicago, to be called the Chicago Air Line, is to be constructed. The Goods Depots, and their sidings with the elevators, cover a large area of ground; the number of cars, chiefly goods and platform cars, amounts to thousands. The canal boats and lake vessels lay alongside the wharves, on either side, or better, all the sides of all the branches of the river Chicago; the total length of the wharves is, I am told, over 25 miles. This is without the Lake front which is not yet used. All these extensive arrangements for the collection of breadstuffs, added to the enormous productive power of the surrounding States, and the still more enormous productive power of the States and territories lying out West, as yet unsettled and undeveloped, may, I think, relieve all Britishers (as we are called here) for any fear in the future of ever seeing Wheat again 90s. per Quarter, as it was under the old Land Laws.

A Yankee at the Hotel, from near Springfield, who is acquainted with the President (Abe Lincoln) who hails from that place, has been doing some tall talk for my benefit. He says that he and Lincoln (please note the

position of the names) so soon as the War be shut up, will be able to contract to feed the Britishers, Frenchies and the Germans, if necessary, with Wheat and Maize, at under Fifteen Dollars gold per Quarter, ex ship, to Liverpool or anywhere else. He explained that he had been in England, also at Paris (the favourite European City for the Yankees); but he seemed to have moved about England and visited Scotland, his visit had given him an idea that the British tiller had better ease off his wheat and buy cattle; that most of the land was better for cattle than corn, and he would that way save lots of the plough. He thought, also, that after a while, a good while, the States would send beef and pork in lots, and perhaps mutton, but he seemed rather uncertain about mutton. I enquired, where would the cattle be kept and fed? "Oh!" he replied, "that there was plenty of forest uncleared in New York, Pennsylvania and Ohio; also in Canada West." He asked some personal questions, such as, "What native I was?" meaning in what county I was born; "Where I was larned?" which meant taught: "could I speak any lingoes beyond English," &c. He then went out to the business part of the City. I also went out, and had a walk round in that portion of the City nearest the Lake, which had been raised in order to avoid the freshets.

I found that one of the large Hotels was in process of getting elevated, and I found my way round to the entrance underneath, in order to see the method adopted. Business was carried on as usual. I found that all the main walls had been cut into and large timbers inserted to carry them; these again rested on 108 supports dependent on the original foundation, and between these two points, 108 powerful screw jacks were being worked by as many men, who struck the levers of their respective screw jacks when the signal was

given by the leader, making 109, on a bell hung up in the centre.

The man told me it was an old Chapel bell, which his father had bought cheap, but I could see no mark on it; he explained that whereas it formerly only summoned the people to service, it was now actually the means of taking them nearer Heaven, whether they would or not.

Although business was going on in the Hotel as usual, and I could not find any cracks in the walls of the superstructure after a careful examination all round. A large number of buildings have been similarly elevated. It is certainly most impressive to witness the progress. Twang goes the Bell, whack go the mallets against the jack levers, which cause the screws to revolve slightly, and the hotel, landlord, landlady, guests, waiters, cooks and housemaids, a miscellaneous mixture of blacks and whites find themselves one-eighth of an inch nearer Heaven than before. Of course the 108 blows must be repeated 960 times, in order to lift the building ten feet, so that allowing for a slight loss, $1030 \times 103 = 103,000$ blows are required, besides 1000 twangs on the bell. The bell whose tone is not silvery certainly, produces a greater dynamical effect on mankind and matter (in the building and contents) than any Church or Chapel bell that ever rang.

The leader, I found, struck the bell outside with a rough leaden hammer, and at rather irregular intervals; so it occurred to me to pick up a flat-headed iron hammer I saw near by, and suggested that he should let me have three rings.

He promptly consented, and dismounted from the block he had stood upon. I remained on the ground and called out, in an audible tone "For three blows and a halt, Ready-y." "One!" striking the bell inside with the iron hammer, which brought out a boom double as

loud as the twang produced by the lead hammer. "You'll break the bell," said the owner. "Oh! no, it is all right." I replied, "you did not hit it properly." "Two!" another boom; "Three!" a third boom. Halt!

"That's a good idea," says the leader, "I never could make them blows go so regular." "All right, we'll try again," said I, and proceeded again on the same system. It was found that the three strokes and a halt did more work and that the men struck more simultaneously; also that the one-eighth of an inch was increased to three-sixteenths. The man was quite taken and greatly pleased. After feeling up the bell inside, I found, as is customary, a ring attached to the top, and pointed out to him that the hammer, which had a string passing through a hole at the end of the handle, could be made into a clapper and a still better sound and tone thereby produced. We suspended the hammer and attached a piece of wire to it, by which to move it. I found that he did not understand that the clapper should only strike the bell and not be kept in contact with it. He had pressed his lead hammer against the outside and had consequently produced the discordant twang by stopping the vibration of the instrument. The booming was not only successful in elevating the structure, but produced a number of visitors from the Hotel, who wondered what sort of a service was going on underground. The visitors being Yankees were very obtrusive and rather an interference and a bother. So I suggested, in a loud whisper, to one of 108 nearest to the bell. "I say Jim, don't you think that ere beam is giving? Tipped him a wink. He saw the dodge, replied "So it are. Better clear out you ere strangers, case you get squashed flatter than crumpets." The visitors departed with speed, so did I, after telling the leader I would calculate up the dynamic effect of the bell and see him next morning. He hoped I would

return soon. I did not do so until the next morning; for on my return to the Hotel about dinner time, with a good appetite, I found on entering the Dining Hall, every table nearly full. In looking round, rather perplexed, I saw the Springfield farmer beckoning me to a vacant seat opposite to him, at a little table. "Here's a seat—come and feed here. You'll keep some of those chaps off." His dinner, or rather the first course arrived; I ordered ditto to save time. In American Hotels, where you pay so much, 4, 4½ and 5 dollars per day, you eat your meals in the General Dining Room at certain hours, and select the dishes from the list.

My dinner arrived and I was asking for some beer, when my opposite neighbour offered some wine out of a bottle which stood near him. It is quite a remarkable event to see a Yankee drink wine at dinner, so I promptly accepted, and he poured out some bright colored white wine resembling Rhine wine. I drank some and, being asked, gave my opinion that I supposed that it was Catawba, from California; that it had the flavour, but wanted the delicacy of Rhine wine, probably from a want of experience in the manufacture. "How did you find out about Hocks, or Rhine wines, as you call them?" "Oh! I lived five months in Germany, last year, to learn the language, and of course met with them all over." "Well, s'pose you're right. When I was going along the Rhine, a few years gone by, I saw the grapes, and I thought as how grapes might grow here, and so save carriage and duty; so I set em on, on my return, and a lot of vines were brought over and planted, and the Catawba they produce aint bad. Oh! no!" I assented. You can't expect to teach people to make wine all at once, with the skill of those who have practised hundreds of years. He stated that he had an interest in some Vine Plantations, and he would stir them up. "Now

young man," he said, "if I were going back to my place near Springfield, I'd carry you off with me, and run you over a fine Illinois clearing; but I'm going to Quincy to see after a new lot I've got there." I thanked him, and was sorry that I should not be able to avail myself of his invitation as I left again the following evening for Canada.

He shook hands and departed, with the remark—"You young Britishers don't gossip and spit, and take the words out of my mouth, like them New Yorkers, who jaw about Wall Street and other such rubbish. Hope I'll run agin you again. 'Ta, 'Ta."

So soon as he had gone, I went up to my room to go into the dynamical calculation I had promised to the Bellringing Hotel raiser.

I found the matter was fuller of details than I had thought of, but having promised it must be done I set to work with the aid of my little book of Engineering Facts and Formulæ, which travels in my bag, and the following calculation will shew the comparative dynamical effect of the Bell in raising the Building, and of a Church or Chapel Bell in drawing people to a place of Worship.

The Hotel is about 90-feet square, and five stories high, about 70-feet, which gives a surface of external wall of 25,200 square feet; or $90 \times 4 \times 70 = 25,200$. Taking four internal partition walls, they would have square area of a similar number of square feet, or 50,400 feet together. Party-walls of a building of that class, would average $21\frac{1}{2}$ -inches in thickness, or two and a half bricks, and internal walls $13\frac{1}{2}$ -inches or one and a half bricks, so multiply the party-wall surface by 1.95, and the internal wall by $1\frac{1}{2}$, the cubical content comes out 49,140 cubic feet and 27,300 cubic feet respectively, or a total of 76,440 cubic feet.

The weight of the building is comprised of the weight of the main walls, internal and cross walls and their foundations; then to that must be added the weight of the floors, (joists and flooring), ceiling, plaster on walls; also of the roof and its slate covering.

Taking the Hotel in question, the total height of wall it is about 70-feet. The foundations, 6-feet; the Basement, 9-feet; the Ground floor, 16-feet; the 1st floor, 15-feet; the 2nd floor, 12-feet; and the 3rd floor, 11-feet, or 63-feet in all; with 15-inches for the thickness of each floor, equal 6-feet, and 1-foot for the coping, total 70-feet.

Foundations—30½-inches thick, 6-feet below the basement walls. Four external walls, 21½-inches thick, on the average; three internal walls, 13½-inches thick; two cross-walls, 13½-inches thick.

Area, cubical content and weight of foundation.

External	Internal	Cross
$(90 \times 4) + (90 \times 3) \times 6 + 86 \times 2 \times 6$		
$(360 + 270) \times 6 + 172 \times 6$		
$630 \times 6 = 3780 + 1082 = 4812$ sq. feet.		

$$3780 \times 2.50 \text{ or } 30\frac{1}{2}\text{-inches} = 9601.2$$

$1042 \times 1.95 \text{ or } 21\frac{1}{4}\text{-inches} = 1961$ total 11562.2 cb. feet which at 100-lbs. weight per cubic foot, or bricks laid in mortar and pointen, = 1,156,220-lbs., or 516.4 tons.

Now take the external walls above the foundation, also the three internal walls and the two cross walls, and the four partition walls in the three upper stories.

Four external walls, 90×70 , of 2½ bricks thick on the average; three internal walls of 1½ bricks thick, running across from side to side and dividing the ground plan into four divisions; the front and back divisions, or No. 1 and No. 4, being 21-feet across, and the two centre ones, or Nos. 2 and 3, being each 20-feet 6-inches across.

Two cross walls, from front to rear, 10-feet apart and 1½ bricks thick; these two walls contained the main

corridor on the ground floor, and above that, each, as regards divisions No. 1 and 4, formed a well hole in order to light the inner bedrooms of the upper floors, the staircases. A skylight covered the space between No. 1 and No. 4, less the landings at the two staircases.

Allow $\frac{1}{2}$ off the external walls for windows, and $\frac{1}{4}$ off all the other walls for doorway and other spaces.

Walls	Area	Thickness	Cubic ft.	Nett cub. ft.
4 External	$90 \times 70 \times 4 = 25200$	$1'95 = 1'95$	$49140 - \frac{1}{4} = 49140$	34760
3 Internal	$86 \times 70 \times 3 = 19555$	$1\frac{1}{2} = 1'5$	$21195 - \frac{1}{4} = 21195$	15896
3 Cross ..	$83 \times 70 \times 2 = 11620$	$1\frac{1}{2} = 1'5$	$12590 - \frac{1}{4} = 12590$	9053
4 Partitn.	$83 \times 41 \times 4 = 13944$	$\cdot 35 = \cdot 35$	$4840 - \frac{1}{4} = 4840$	3660
4 Basemt.	$83 \times 10 \times 4 = 3320$	$\cdot 7 = \cdot 7$	$2324 - \frac{1}{4} = 2324$	1741

Total 64,812

or at 100-lbs. per cubic foot = 6,481,200 lbs.

To the above add the brick arch under the central corridor, 10-feet wide and 90-feet long. The arch at 5-feet radius would be 10-feet multiplied by 1'57, and at one brick end on, thick, this would be

$90 \times 10 \times 7 \times 1'57 = 2043$ cubic ft., at 100-lbs. = 204,300 lbs.
20 cubic feet of concrete, per running foot, for filling up the shoulders of the arch,

gives 1800 feet at 119 lbs. = 214,200 lbs.

900 sq. feet of 4-inch flagging, at 143-lbs. per cubic foot.

$900 \times 3 = 300 \times 143 = 42,900$ lbs.

Taking down the above totals 6,481,200 walls

"	"	204,300 arch
"	"	214,200 filling in
"	"	42,900 paving

6,942,600 or 3,100 tons.

Having now ascertained the total weight of the brick-work, there remains the weight of the four floors, (the ground forming the other floor) joists and planking; also the weight of the five ceilings and the roof and its slates; also the plastering of the walls and ceilings.

Beginning with the joists: two areas on each of the four floors of 88-feet long, by 21-feet wide; and two others 20-feet 6-in. wide only, which allows for the two cross walls, and taking a 12-inch $\times$ 3-inch joists, 22-feet long, on the average, placed 1-foot apart, gives—

$$\frac{88 \times 4\text{-feet}}{15 \text{ in.}} = \frac{352\text{-feet}}{1\frac{1}{4}} = \frac{1408}{5} = 282 \text{ joists.}$$

Each joist 22-feet long, 12-inches deep and 3-inches thick, contains $5\frac{1}{4}$ cubic feet of timber, weighing 30-lbs. per cubic ft., so that the joists would weigh $(282 \times \frac{1}{4}) 4 = 6204$ cubic feet $\times 30 = 186,120$ lbs. Next the flooring, with deals 1-inch thick and 9-inches wide $(88 \times 22 \times 4) 4 = 30,976$ square feet.

A square of flooring is 100 superficial feet, and takes fourteen deals 12-feet long, 9-inches wide and 1-inch thick; so that 30,976 square feet, or 310 squares would take 126 square feet of deals; for each hundred or 39,000 square feet in all, equal to 3,260 cubic feet, multiply at 30-lbs., and the total weight is 97,800 lbs., add to this the 186,120-lbs. for the joists, and you have 283,920-lbs. or 126 tons of timber.

Now take the plastering.

The surfaces of all the walls and ceilings have to be covered with $\frac{1}{4}$ -inch laths and plaster 1-inch thick.

On laths 70 square yards can be plastered by using the plaster made from 1 cubic yard lime, 2 yards sand, and 3 bushels of hair. Lime weighs 1485 lbs. per cubic yard, and sand 2700 lbs., and hair 15-lbs. per bushel; so for 70 square yards, the figures are—

Lime	1-yard	=	27 cub. ft.	$\times$	55-lbs.	=	1485
Sand	2 "	"	54 "	"	$\times$	100 "	" 5400
Hair	3-bushels	..	..	$\times$	15 "	"	45

Total 6,930-lbs.

for each square surface of 70 square yards, or 630 square feet, practically 11-lbs. per square foot.

A bundle of single fir laths $\frac{1}{4}$ -inch thick, should be 500 feet, but the average is usually less, say 400-feet. One bundle of laths and 500 nails, will cover about 4 square yards, or 36 square feet. 500 nails will weigh, at 1-inch long, about 2-lbs. A bundle of laths, 400-feet long, at $\frac{1}{4}$ -inch thick = 100-feet at 1-inch = 1200 square inches, or rather over 8 cubic feet.

Take the ceilings, of which there are five, and to save trouble about cornices, and simplify the figures, calculate the whole area without deducting the spaces occupied by the walls—

$$90 \times 90 \times 5 = 40,500 \text{ square feet.}$$

Now the walls. The surface of the external walls will be as before— $90 \times 70 \times 4 = 25,200$.

Of the internal walls, which have of course two surfaces— $(86 \times 70 \times 3) 2 = 36,120$.

Of the two cross walls and four partition walls—

$$83 \times 70 \times 4 = 23,240$$

$$83 \times 42 \times 8 = 27,838 \text{ or } 51,128 \text{ sq. feet together.}$$

adding the four items of 40,500, 25,200, 36,120 and 51,128 square feet, it gives, for both ceilings and walls, a surface of 152,948 square feet, or 16,994 square yards, or 243 square surfaces of 70 square yards each. Multiply 238 surfaces into 6,930 lbs., and you have 1,683,990 lbs., to this add 2 lbs. for nails in each 36 square feet,

$(152,948 \div 36) 2 = 8,500$ -lbs. and for laths 8 cubic feet of wood, weighing 30-lbs. per ft.

$(152,948 \div 36) 240 = 1,020,000$ lbs., and the grand total is 2,712,490-lbs. or 1221 tons.

There now remains the roof which had two ridges running from front to back each covering one half of the building except 5 ft., the two centre walls forming, except at the front and back, a well hole to light the two staircases. The main one being in the second division on the left of the main corridor and the other in the corridor itself, at the 4th division wall.

The basis of the roof trusses, which were placed 10 ft. apart, were 40 ft., comprising $19 + 19 + 1\frac{1}{2} + 1\frac{1}{2} + 1.9 = 40$ ft. The height of the pitch was 10 ft. on $\frac{1}{4}$ th, so that each half truss formed a right angled triangle with a base of 20 ft. and a perpendicular of 10 ft., the third side would be the hypotenuese of a parellelogram, having a content of 200 square feet.

The square of the base plus the square of the perpendicular, equals the square of the hypotenuese and conversely. $10^2 + 20^2 =$ length of hypotenuese or rafter, $100 + 400 =$ square root of 500 = 22.36 ft., this length is required to get the area covered with slates $(90 \times 22.36) 4 = 8049.60$ square ft. or say 8050 square ft. Slates weigh $7\frac{1}{2}$ to 9 cwt. per 100 square ft. taking Duchesse's, which are 2 ft. $\times$ 1 ft.. The area of 4 sides of roofing, $90 \times 22.5 = 8100$ square ft. or 81 squares at 9 cwt. = 729 cwt. or 36 tons 9 cwt.

The tie beam is 12 $\times$ 6, being 40-ft. long., therefore each one contains 40 cubic ft. and as it takes 10 trusses to enclose 9 spaces of 10 ft. each there would be $(40 \times 2) 10 = 80 \times 10 = 800$ cubic ft. for the tie beams alone of two roofs.

20 king posts of 10 ft. long by 6 in. thick would make 100 cubic ft.

40 beams or rafters to complete the triangles, 22.36 ft. long each. $40 \times 22.36 = 89,440$ cubic feet.

2 ridge pieces 12 inches deep by 6 inches thick is $(90 \times 2) \times .5, 180 \times .5$ that is 1 cubic ft. to 2 ft. run or 90 cubic ft. in all.

Add together the items of timber after putting in a strut running from the angle of the king post to the truss beam at its centre, this makes it 11.18 feet long.

40 beams 11.18 long of 12 inch $\times$ 3 inch equals.

$40 \times 1 \times 25 \times 11.18 = 40 \times 11.43 = 458$ cubic feet.

20 Tie beams, 800 cub. ft.—20 king posts, 100 cub. ft., 40

trussbeams, 894.4 cub. ft. ; 2 ridge beams, 90 cub. ft. and 40 struts, 458 cub. ft. makes 2342.4 cub. ft. of timber in all, without the purlins for the support of the slates, weighs 314 tons.

Purlins (bearing nearly 10 feet) made of deals 8 inch $\times$ 6 inch and rafters at right angles to these to carry the slates.

The purlins being 9.10 $\frac{1}{2}$ feet long and the length of the principal rafter being 22 $\frac{1}{2}$ feet long, 4 purlins would make, with the ridge beam and the base made, 5 spaces of 4 ft. 6 in. each, so that with 9 spaces and 4 purlins each in each side roof there would be 4 sides to 2 roofs and 36 purlins in each of 124 purlins in all, of 4 ft. 6 inches long = 558.4 running feet at 3 ft. to a cub. ft. = 186 cub. ft.

The slate bars running at right angles between these would be about 4 ft. 6 inches long and 2 ft. apart, centre to centre, so that each 10 ft. space between the principal rafters would take 4 slate bars of 3 inches $\times$ 2 inches between the purlins, 5 times over making 4 $\times$ 5 $\times$ 9 for each of the four sides of roof, or 180 $\times$ 4.6 long = 850 running ft. at 8 in. $\times$ 2 in. or 24 ft. to a cub. ft. = 35 cub. ft. which added to 186 cub. ft. makes 221 cub. ft. together or 6630 lbs. or 3 ton.

The main corridor has a pair of glass doors about 7 ft. within the entrance. First inside on the left is the office.

The bar occupies the ground floor front, on left of door 57 $\times$ 21 less the piece 14 $\times$ 12 partitioned off from the office. The Dining Hall is on the opposite side with a pair of doors for the entrance which are just within the inner door. The bar door is between the outer and inner door. The bar has an exit beyond the bar counter through the first transverse wall into a passage leading to another door in a side street. Luggage also comes in this way to go upstairs and conversely, the chief staircase being in the second division, occupying about one half, with the

Boss's private room behind it. The stairs are six ft. long and very handsome. A second smaller staircase starts from the 3rd division and goes up and returns by means of a landing across the corridor. Beyond this are sundry sanitary arrangements, also passages leading right and left and giving access to some larger rooms, looking out on the back. There is also a large room beyond the main staircase, communicating with a back room of similar size.

BRANTFORD, CANADA WEST,
3rd August, 1864.

MY DEAR FATHER,

As my last letter was dated Chicago, you may wonder at this change of address, but I came the 600 miles to be present, by invitation, on the occasion of the transfer of the whole line of the Buffalo and Lake Huron Railway to the Grand Trunk Railway. The Buffalo and Lake Huron is about 160 miles long, and extends from Fort Erie, at the upper end of the Niagara river, where it leaves Lake Erie, and just opposite to Buffalo to a port called Goderich, on Grand Haven, Lake Huron. I understand it is proposed to build a bridge across the Niagara river, between the Buffalo side and Fort Erie, and thus put the line into physical connection with the New York Central, the Erie Railway and the other important lines, which run into Buffalo. It is circumstantially stated and so far as I have seen correctly, that one half of the Empire State of New York still consists of the virgin forests, the best trees only having been cut out. If this be the case with the state of New York, what is the condition of the other States? The New England States are probably more settled than New York (in fact in Massachusetts the female population exceeds 50 % slightly) but these States are all of small area. In Ohio (the State which has its northern boundary on Lake Erie, being really in continuation westward of New York State, except that a small piece of the State of Pennsylvania, with the town of Erie, intervenes). The railway, except where it follows the course of a river, usually runs in a gap cut through the forest, about 50 or 60 feet wide. This accounts for the scenery on American railways in most places being

so monotonous. It is very irksome to see nothing but pine trees after a few hundred miles, and to find very little change when one stops at a depôt or crosses a river, even in these cases the eternal forest ever returns, diversified with flats which have been burnt off and turned to cultivation.

As one progresses West through Michigan, towards Wisconsin and Chicago, in Illinois, wheat becomes more generally visible, and from Chicago, north through Wisconsin to Milwaukee, or S.W., via Alton (near where the Missouri and Mississippi join) to St. Louis on the Mississippi in the State of Missouri, corn fields are the chief objects, until they in their turn gradually give way to the Prairie with its rolling square miles of land like an ocean in extent, where you can lose yourself, and not be able from horseback to see any single thing, physical or natural, between you and the horizon, an horizon of land instead of water.

But to return to the Amalgamation Festival. The chief thing was a Dinner in a large Hall, with the Mayor in the Chair. One of the Members of the Government was present, also a large assemblage of Railway Directors, Managers, Traffic Superintendents, Chief Tickets (which means the Heads of Passenger Traffic Department), Engineers, both Roadmen and Locomotives.

The whole company drank a large quantity of very bad sparkling Champagne, with a label resplendent with the stars and stripes; the liquor was no doubt manufactured at New York; they also drank Canada Bourbon whisky, which is very good. I limited myself to weak whisky and water. Speeches were made, very long; the liquor sent many to sleep and the assembly gradually dissolved. A party of us went off to the house of the local doctor, a very nice well informed gentleman, who talked to us about the locality and the Indians who lived on the

Reserve on the Grand River not far off, and introduced the chief, a gentleman in civilized clothing, half Indian half Highlander. There was to be an Indian fête under his presidency next day, about 30 miles off, to be reached partly per rail, partly by water. We were all invited and the majority accepted, including myself. We went to bed; in the morning there was a very extensive complaint of bad headaches and a demand for soda water to take inside, and water to bathe their heads outside. A number took an early ride in a waggonette to cool themselves, I went on the box seat and drove most of the way. We returned to breakfast at about 10.30, and then the party made a rendezvous at the Doctor's, and we went off to the railway dépôt, to go to the Indian encampment and fete on the Grand river.

On our arrival we found an extensive collection of Indians, all clad in miscellaneous garments, clearly supplied to them from the second-hand shops in Europe. The leaders of the assembly had a palaver with the Chief and his Council which ended amicably, although the noise made in an unknown tongue was considerable. Dinner was served of fish, venison, baked in the ashes, toasted and prepared in other ways by the squaws. Beer and whisky were abundant, and after the Red Skins had imbibed a certain quantity their legs grew unquiet and they evinced a disposition to dance. A dance was rapidly arranged near to a large round bonfire, and the men jumped and whirled, and galloped, and tossed tomahawks and sticks, and shrieked and shouted to the music of some pipes, rather like untuned bagpipes. We were seated on rugs on the ground near to the rear of the Chief; when it got dark the Chief retired to his hut, and we all slept on rugs on the ground in two adjoining huts. The row and the dancing outside went on till early morning, although the supply of liquor had been stopped.

The squaws were in a minority and did not take much part in the fête, except in cooking the dinner and standing round and screaming or cheering, when one of the men did a double twirl, or another came down with a bang, through excess of impetuosity and whisky.

The fête was to a certain extent interesting, and shows that the Indians, when well treated and located on reservations of land, will employ themselves in fishing and hunting, and in cultivating some corn and vegetables, in a rough manner. We returned to the railway, some went on towards Toronto, via Stratford, where the Buffalo and Lake Huron joins the Western section of the G.T.R.; some of us returned to Brantford where our baggage lay.

Yours, &c.,

W. T. N.

HAMILTON, CANADA WEST,

5th August, 1864.

MY DEAR FATHER,

After getting our baggage at Brantford and having a rest, during which I wrote you a letter, the Indian Chief, dressed in ordinary costume instead of his kilt, and myself, came on to this place. At the Dépôt we met Mr. Hopkins, Governor of the Hudson Bay Company's territories; a very quiet, harmless looking old gentlemen, but with a quick bright eye, which betokened that he would be an awkward customer if rubbed the wrong way. He is the supreme ruler of a considerable portion of the North American Continent, and has the power of life and death in his hands. He goes round annually to visit and inspect all the Company's back settlements; the journey is a very long and arduous one, and is mostly either by canoe or on horseback. His wife and two daughters were seated on a piece of timber close under the Dépôt wall, so as to be in the shade.

Hamilton is a small seaport, I mean Lakeport, at the West end of Lake Ontario. The Indian Chief, who resides here, tells me that the streets and avenues are only few in number, but have luxuriant trees. The ground is rather low and swampy and ague it seems is prevalent among the lower classes who work at the Quays. After a confab with Governor, the Chief took leave; the Governor is talking to his wife and daughters, as he is going away on his tour, and they go somewhere beyond Toronto, to await his return, some six or eight weeks hence.

I am writing in a Car, which, with some others, will start in one hour for Detroit, via London.

I hear the whistle of the incoming Locomotive, but there is no hurry at present, as there is a lot of unloading and loading to do; so I will tell you about the Locos before closing the letter, in time to post it at the Dépôt.

The Locomotives here have a bell on the top of the boiler, near the safety-valve; and when they start they ring the bell. The whistle is used as a signal for the breaks and also for the way signals; the number of whistles given for the latter to be lowered, varies. Of course it does not always follow that the signals are lowered in response to the whistles. Most of the lines are single and the trains have to pass at certain stations. Every station does not possess a siding or passing place, in fact, some of the wayside Dépôts consist of an old baggage Car seated on the ground, as if its wheels had departed and left it behind. This contains the Ticket Office and the offices of all the other Departments all in one; also sometimes the Station Master's bedroom.

The trains have, I am told, usually two hours right of way; that is, if a train arrives at a stopping place before the train going the other way arrives to cross, it must wait up to two hours before it can proceed without the arrival of the other train. After that it can proceed. There is no telegraph. Sometimes the rulers of the train get impatient and run on without waiting; this is a risky expedient, as it is not unlikely that the two trains may meet in the middle; it is called "running Wild Cat."

While at Montreal, I went out on a trial trip on a new Locomotive; the Loco foreman and three others went, besides the fireman. I was shown the various levers, and soon saw how the Loco was managed. I saw one lever leaning against the boiler, as yet untouched, and enquired about it; it was explained to be the reversing lever, necessary to reverse the cylinder slides, so as to send the driving wheels in the contrary direction

and back the train. The lever could be reversed while the steam was on, but that was likely to damage the machinery, so it was better to shut off steam and then pull over the reversing lever. It had a toothed wheel and a ratchet, by which its position could be regulated, and it could be used to regulate the cut off of the steam into the cylinder, so as to save steam and fuel on a level or easy incline, by cutting off at one-half or three-fourths stroke.

After running about 12 miles at various rates, and making two stoppages, because one of the driving-wheels when on a curve, grated against the boiler supply-pipe, a shanty was arrived at, where a halt was made; the party adjourned to the shanty, leaving the Loco by itself on the line. I found that I was to pay my footing, so stood a whisky all round, and drank their healths in whisky and water (only one other diluted his whisky.) I heard something said about an expectant train. They proposed to return the compliment in a second glass, but I went out to the Loco, and stooped down while on the line beside it, to look where the offending wheel scraped the pipe. While stooping, I heard the beats of another Loco at some distance, which was the approaching train. It is a curious fact that vibrations can be heard a much longer distance with the ear close to the earth, than by standing up. I jumped on the engine, pulled the whistle cord and called out "here comes the train." One replied "it's not time yet," the others moved towards the line. The blowing whistle was replied to by another whistle not far off coming round a curve out of the woods. I had already pulled over the reversing lever and was just turning on the steam. "Leave that alone, d—— you," shouted the foreman, "you'll run the two together." "All right, no I shan't," I answered, and the Loco started off backwards at a moderate rate. "Not much steam," the man shouted. "Only got quarter steam on," I

called back. During this time the men were running hard alongside of the line to catch the engine and me. The other Engine had whistled down his brakes, and was pulling up, so I shut off steam, and took a short turn at the tender brake. The men then overtook, rather blown, and began to climb on; the first man, the stoker, was for displacing me, as I had turned back to hold the steam lever to put on more steam as soon as the lot were on board. He came to take hold of the lever, I stopped him and said, "Oh! no. Stop! Take off the brake," and as he hesitated, added "Look sharp there." He let the brakes go and I put on steam gradually, and we went off quickly on our return out of the way of the train. The foreman ruled that as I had served my time and paid my footing, and saved them all out of a mess, I should drive, which I did till near Point St. Charles, when I asked the foreman to drive, as I did not know the signals for the switch into the Loco yard,

Time is nearly up, so I must close for this occasion.

Yours, &c.,

W. T. N.

KENNARD HOUSE, CLEVELAND, OHIO.

August, 1864.

MY DEAR FATHER,

Day before yesterday I arrived at Detroit, from Hamilton via the Great Western Railway of Canada, passing London, Canada West, the head quarters of the Great Western. Detroit is the chief town of the state of Michigan and is situated on the Western bank of the Detroit River which connects Lake Huron with Lake Erie and also forms the boundary between Canada and the States. Detroit is at the lower end of the river about 25 miles from Sarnia, at the upper end near Lake Huron. The Canadian town opposite Detroit is Windsor. Detroit is chiefly notable as a great railway centre. The Michigan Central, which runs from here to Chicago; the line called Indiana and Toledo, at which town it joins the Michigan Southern, (another line which runs to Chicago,) the Grand Trunk, and the Great Western all come here, and here a large quantity of the bread stuff from the Western States, bound East, to the European markets, is distributed for conveyance over the various lines running East. 'There is much competition and jealousy.

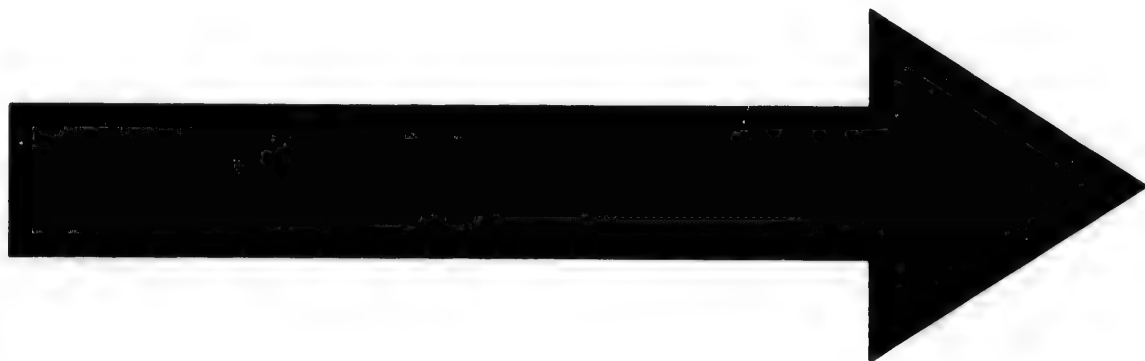
Most of the passenger traffic between New York and Chicago passes this way, coming either via Suspension Bridge and thence along the G.W.R. or via Buffalo and the Lake Shore Line, which runs along the southern or Ohio shore of Lake Erie, passing Cleveland and Toledo to Detroit, which is 679 miles from New York by the nearest line. Chicago is 300 miles further west, except 18 miles which makes it 961 in all, from New York. Buffalo is 412 miles from New York, Toledo 212 miles from Buffalo and Detroit 62 miles more.

The wharves, mills, dry docks, ship yards, foundries, grain elevators, warehouses, and railway departments extend about five miles along the Detroit river. The

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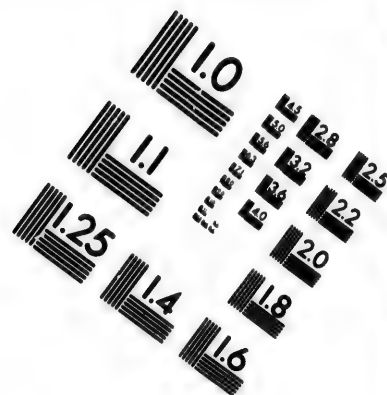
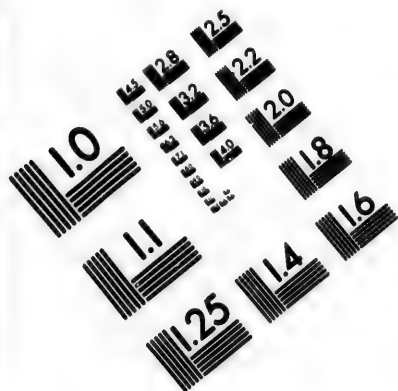
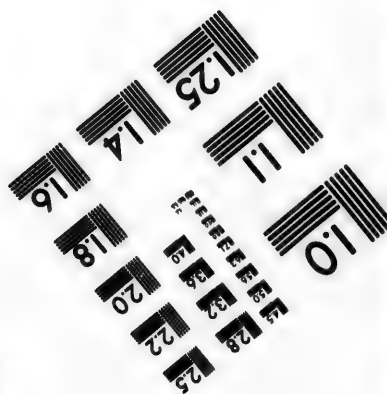
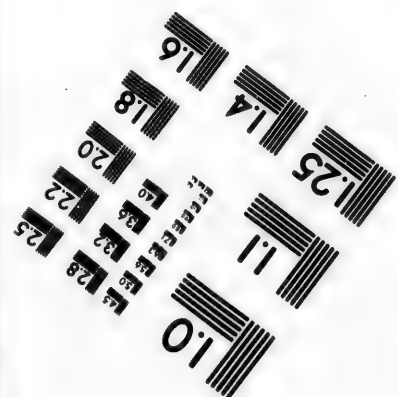
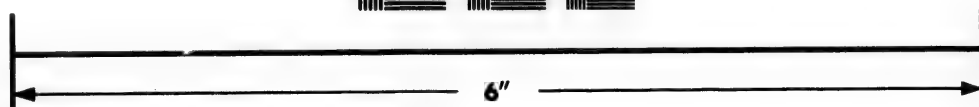
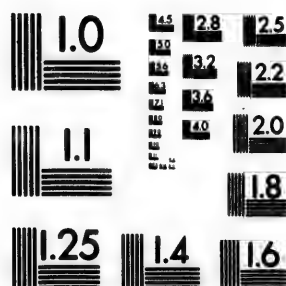


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City is laid out on two plans, one that of a grand circus with avenues radiating therefrom and the other of streets crossing each other at right angles. The result is some intricacy and a number of triangles at the junctions of the streets, but many of these are laid out as gardens, which is a compensation.

After visiting the Railway Depôts, where miles and miles of goods' cars, full and empty, were lying, the full ones bound east and the empty ones bound west, for a new cargo, I went to dine with one of the Railway Agents, who was kind enough to ask me, as a fellow countryman; he was an Englishman from Yorkshire, and had started life on the Lancashire and Yorkshire Railway, and been promoted out here to a good berth. In the evening I went on board a fine paddle steamer, named the *Morning Star*, bound down the river and across Lake Erie to Cleveland, the Forest City. This steamer, like most of the passenger steamers, has a walking beam engine, and was wide and shallow, so as not to draw much water. The walking beam appears up above the two stories of cabins. The walking beam is the same principle as the old pumping and other engines, invented by Watt. It is curious to see the ends of the long walking beam going alternately up and down. Dickens nick-named it a "top-gallant sawyer." The piston rod connecting bars join one end to the large steam cylinder, and the connecting rod at the other end is attached to the crank axle of the paddles, which causes the latter to revolve, and so propels the vessel. The *Morning Star* was a very fine boat, and ran fast. I stayed on deck until the steamer passed out of the Detroit River into Lake Erie, and got out of sight of land, and then went to bed and had a good sleep. The air on the lake was fresh and agreeable, and a great relief after the heat of the sun during the day.

During the day, while examining some cars furnished with a new patent axle bearing, and explaining the action which was beyond the capacity of one of the gentlemen present, I put my fingers on to the axle box, and nearly burnt them by contact with the hot metal heated by the Sun. It is needless to remark that the Yankee contradicted my explanation flatly, until the Manager, my entertainer came by, and being appealed to, explained its action exactly as I had done. I twitted the rude Yankee, who retorted that no one could think of believing me because I was much too young. One of the others rejoined that no one ought to listen to him, because he was a soft head.

The Morning Star made a rapid run, and we found ourselves at Cleveland early in the morning. The Election of the Delegates sent by each State to choose the President is occupying attention, and the Lincolnists and McClennanites are stumping the various States and doing a great deal of tall talk, mingled with the most terrific mutual abuse. There is to be a great meeting here this evening which I purpose attending. I have had a long walk along the tree-lined Avenues and streets of the Forest City, and well it deserves its name.

The trees are chiefly maples, and the American ash. The latter grows in great plenty in the various forests, and is largely used to make the light furniture, tool handles and light vehicles with thin tall wheels, which look all spokes and no rim. The trees greatly abated the heat. The appearance of the avenues and streets, with lines of trees planted on either side between the footpaths and the roadway, or as they are called here, side walks, (which seems to me a very clear and understandable word) is most pleasing. The Londoners should try trees in the wider streets, and after five years, if the trees grew well, no one would raise a word against them. The children

as they came out of school were playing, running and dancing underneath the trees, on their way home. They are much better and healthier looking than the New York children, and not so presumptuous and quarrelsome.

Two little girls asked me the time; I told them 12.45 by Cleveland time, and 12.00 by New York. "Oh! how late," said one, "we must run or we shall be late for dinner;" so they joined hands, ran across the Avenue and disappeared down a side street. If it had been New York, every article of my apparel would have been criticised by the boys, and rude questions put as to where I came from.

Coal and Iron are found in the neighbourhood and are worked near Cleveland. Stone and Marble are also found. There are manufactories for wooden ware, agricultural implements and railroad cars.

The city is divided into two parts, by a river named Cuyahoga. One portion is called Ohio city. The Ohio canal, completed in 1834, runs from Lake Erie to the Ohio river at Portsmouth. Cleveland is on the route of the Erie Railway, from New York to Chicago. The Erie Railway starts from Jersey City, on the other side of the Hudson, and then runs through New Jersey, for about 30 miles, and then enters New York State; after running about 200 miles through beautiful scenery, it crosses the Susquehanna on a viaduct, 1200-feet long and 120-feet high, passes Elmira, 274 miles; Hornellville, 332 miles, to Dunkirk, 460 miles, where it joins the Lake Shore line and goes on to Cleveland, 603 miles. The Erie line is considered a great engineering triumph.

I will now close this letter and write to you about the meeting before I start for Cincinnati, via Columbus, the Capital of the State of Ohio.

Yours, &c.,

W. T. N.

KENNARD HOUSE, CLEVELAND, OHIO,
8th August, 1864,

My DEAR FATHER,

The Meeting, alluded to in my last, was held at a large hall, and I duly attended; a Member of the Senate and two or three Members of Congress were, I was told, on the platform. The whole of the Hall, including a gallery, was stuffed full, so tightly, that no one scarcely could move. Some one attempted to speak, being introduced by the local member, when a row arose. Three people on the platform then tried to speak all at once; the row increased, the shouts of the rival sides drowned all speaking; some revolver shots were fired. Those on the platform who had intended speaking, wisely retired, and a man with a revolver in his hand began, on the platform, with a shout or shriek of "fellow citizens of Ohio, order is necessary, I intend to speak" and "I'll shoot anyone who interrupts me, or else my friends will." He swept the crowd round with his revolver and pointed it specially in the direction of the door, near where I was being squeezed. A move was made for the door in question, and whether I wished it or not I was carried in the crowd out through it, and feeling the fresh air and the increase of space a great relief, and hearing two more revolver shots, I thought that the speaking having ceased and the shooting begun, I would return to the Hotel and pack up for Columbus.

It seems, so far as I could learn, that a number of the men from the Iron Mines and Works had organized a demonstration in favour of General McClennan; the well-to-do citizens of Ohio being in favour of Lincoln.

Revolvers seem to be more effectually persuasive than the highest eloquence. So good bye.

Yours, &c.,
W. T. N.

INKERMAN TERRACE, MONTREAL,
29th Oct., 1864.

MY DEAR FATHER,

On the 27th, the Delegates from the Maritime Provinces, who had come up to discuss the question of the Confederation of all the Provinces with each other, arrived from Quebec by the steamer, and were received by a large crowd, headed by the Mayor, were entertained on the following day by that Worshipful Gentleman, and after the Dinner went to a grand Ball, given at St. Lawrence Hall, last evening, in honour of their coming and of the important question under negotiation.

The Delegates comprise Col. Grey, New Brunswick; Hon. Mr. Tilley, Mrs. and Miss Tilley, Hon. Mr. Tupper and Mrs. Tupper, Nova Scotia; Hon. Mr. Henry, Newfoundland. Col. and Mrs. Bernard, and the Hon. Wm. McDougall with his eldest daughter (who usually goes in charge of him when his wife does not accompany him) together with Adolphe Caron, the son of Judge Caron of Quebec, accompany them as entertainers.

The Ball was very successful, the Montreal ladies came out in strong force, especially the young ones. The Hon. Mr. Henry, Attorney General of Newfoundland who is an eligible bachelor with whiskers, was nearly danced off his legs.

The Mayor and his daughters (French Canadians) and other members of the Corporation did their best; the Officers of various ranks and regiments attended in full uniform, which diversified the spectacle; but some of the ladies thought that the bright scarlet of the uniforms was detrimental to the effect of their ball dresses.

I give the Royal Artillery uniform the first place, for

elegance of appearance. It consists of a dark blue tunic with scarlet facing on neck only. Tunic and overalls trimmed with gold lace. Pouch and sword belt of gold lace with narrow scarlet line down the centre. Gold lace pouch with cannon on it, and the motto "Ubique" (everywhere). Spurs (yellow), with blind rowels for dancing. The blind rowel is often a pierced half sovereign in lieu of the brass disk. The head-dress is a square topped bearskin busby with a red bag hanging down on the right hand side, and with a white plume on the left hand side. The gold and red cap lines are fastened round the busby, and go down behind, being separated to go round the neck, and terminate in an aiguillette pendant from the right gold lace shoulder strap.

The Delegates retired early, as they were to go early next morning per special train to St. Anns, on the western branch of the Ottawa. The western and main outlet of the Ottawa falls into the St. Lawrence, at the western end of the Island of Montreal, between St. Annes and Vandreuil; this channel is divided into two parts, just below St. Annes, by the Island of Pierrot. From Pierrot to Lachine the St. Lawrence is called Lake Lachine, and at Caughuawaga, an Indian village on the south bank of the river, the Lachine Rapids commence and run down towards Montreal. The Indians in the above long-named village, make their livings by piloting canoes, boats and steamers down the rapids. Steamers with troops on board are not allowed to go down the rapids, but go through the Beauharnois Canal, which is eleven miles long, from Lachine to Point St. Charles, with a lockage of about seventy feet. The central branch of the Ottawa, flowing at the back of the Island of Montreal, called Rivière des Prairies, has rapids in its course; it is joined at Terrehaute by a

third channel, and these two join the St. Lawrence at Lachenaie.

The Island of Montreal is divided into two districts, one called Hochelaya, the ancient Indian name of Montreal: the extreme eastern portion of the town is still called Hochelaya, and is solely inhabited by the French portion of the community. Montreal is a corruption of Mont Royal, the name given by the French settlers to the fine hill with two crests, on the face of which the City has been built, and which is now called the Mountain. The other district is called Jacques Cartier, after the ancient navigator of St. Malo, who first sailed up the St. Lawrence, in the 16th century.

Upper Canada was acquired from the French in 1759, and Lower Canada in 1760, after the victory of General Wolfe, on the heights of Abraham, at Quebec. The possession of the whole was guaranteed by the Treaty of Peace of 1763, Temp. George III., Louis XV.

From St. Annes, special steamer took the whole party up the River Ottawa, to the City of the same name, distant 103 miles from here, in order to view the future Capital, where the Attorney-General (the Hon. John A. Macdonald) and the other Members of the Government were awaiting them.

In the Colonial Governments the Attorney-General is the head of the Government, or as we should call him here, the Prime Minister.

I should rather suppose that a First Lord of the Treasury would be an awkward title in the Colonies, where the Treasury is often bare, and consequently a tender point. The Government, or Council of State, is composed of six members, with the Governor-General as the President. The six members are, Attorney-General, Minister of Finance, Minister of Militia, Minister of Agriculture, Postmaster General and Secretary of State or Home Secretary.

The New Parliament Houses are finished and on view, and are stated to be very handsome as well as convenient ; they stand on the northern bank of the Ottawa, a short distance below the Falls, where the bank is about 60-feet high. The visit to Ottawa will be also attended by the Hon. James Ferrier, a Senator, Mr. Brydges, his Secretary, and myself as Attaché.

The scenery on the Ottawa, is stated to be very beautiful and as it is now the Indian summer (a fine fortnight in the late Autumn called by that name) and the maple trees have all turned from green to brown and red, it ought to be remarkably fine.

Yours, &c.,

W. T. N.

RUSSELL HOTEL, OTTAWA,
2nd Nov., 1864.

MY DEAR FATHER,

Referring to my last letter concerning the Delegates from the Maritime Provinces, we all went by special steamer up the Ottawa, to the City of the same name. The voyage was most delightful and the scenery charming. The hills were clad in red and gold from the colour of the maple trees. The Delegation and the company on board were welcomed, late in the afternoon on arriving at the landing place, by the Mayor of Ottawa, several of the Members of the Government, a band who played while a speech was being made and could not be stopped, and a large crowd. The party dispersed to various hotels, had dinner and mostly went to bed.

The City of Ottawa was formerly called Bytown, in honour of Colonel By, R.E., by whom it was laid out in 1827. It was incorporated as the City of Ottawa, in 1854, and was fixed upon by the Queen as the future Capital of Canada, in 1858. The Ottawa forms the boundary between Upper and Lower Canada. The French Canadian, *i.e.*, the population who are Roman Catholics, extend from the Gulf of St. Lawrence, far below Quebec, as far as the Ottawa.

On the following day, the whole party visited the new Parliament Buildings, which are very handsome, with a central tower with pinnacles, two wings, one for the Senate, one for the Assembly, each having four lower towers with dormer roofs, decreasing from the upper edge of the stone work by a very graceful curve; the style is gothic, with large pointed arched windows in the ground floor, and double light windows with two

coupled arches in the 1st floor. The situation is very fine, on the bank of the Ottawa river, just below the Falls, where the bluff is at least 60-ft. above the river. The Speaker's residence is at the extreme corner in one of the towers, and the dining-room has two windows overlooking the Falls; altogether a most charming situation, and a great contrast to the place now in use at Quebec.

A Luncheon was held in one of the large rooms, at which two Members of the Government, the Hon. Jno. A. Macdonald, the Attorney-General, and the Hon. D'Arcy McGee, made speeches. They are both very effective speakers. The Hon. Jno. A. Macdonald, or John A. as he is called, bears a very remarkable personal resemblance to Benjamin Disraeli.

A Ball was given by the citizens of Ottawa, called the Welcome Ball, in honour of the visit of the Delegates from the Lower Province.

It was held in the large hall of an Hotel, called the British, but not yet quite finished, and was most entertaining and amusing. The Mayor and his better half, a good lady, fair, fat and forty, of at least fifteen stone, did the honours. The Mayoress danced square and round dances, most vigorously, and in one case, she, and the Hon. Mr. Henry, of Newfoundland, who was nearly six feet high and stalwart in proportion, were going at full speed, when they came in contact with a young couple; the effect was, that the young man went down, his partner went up and came down into the lap of a lady seated near the wall, driving the said lady's head against the wooden partition, with a thump that sounded all over the room. The lady turned furiously on to the young lady in her lap, rubbed her head with one hand and pushed the girl away with the other, who slid off on to the ground and fainted. The heavy couple maintained their course, and

soon not only cleared a passage for themselves, but caused nearly all the couples to cease dancing and run into the corners for safety. The leader of the band wisely closed the dance.

The gentlemen's hats and coats had been left in exchange for (or as would be said here "against tickets") in a room under the charge of an official, who turned out to be an Irishman, who after the guests' supper was finished got very tight, and when leaving time came, all applicants for hats, coats, &c, were asked whether they were the Mayor; on saying no, he informed them that he knew where the Mayor's hat and coat were, but no one else's, (in point of fact he was seated upon the coat in the middle of the floor, and had the hat on his head, when he was not brushing it with his sleeve). A frightful confusion ensued, people sought their own articles with ill effect, the wiser ones returned to the Ball room and resumed dancing. Nearly every one had to walk home, as carriages are scarce in Ottawa at present. The officials of course intervened, and endeavoured to restore order, but it was too late, the only things visible were three large heaps of hats and coats, one in the middle of the floor and two others in corners. The ladies obtained their cloaks all right, and were kind enough to lend their conductors their woolly neckerchiefs, &c, to wear as turbans, for the night was cold. I got such a covering, and abandoned my hat and coat till the morrow.

On the following day, after recovering our garments, visits and excursions were made into the forests, covering the neighbourhood, and from which the lumber, floated down the Ottawa and St. Lawrence, to Quebec, is derived.

The trees are cut in Autumn, or the Fall as it is called here, and early Winter; are hauled in Winter over

the snow to the banks of the rivers and creeks, are launched in the Spring, made into small rafts; these small ones, after passing the timber shoots by which they descend the falls, already mentioned, are united together to make larger rafts, over 150-feet long and about 30-feet broad, upon which huts for several families of raftsmen are built, and the whole caravan starts to float down. They live mostly on fish on the way down, which they catch from the raft, and carry with them corn and other kinds of provisions. They are, however, often very poor until they get to Quebec and receive their money, when they become often very uproarious, and on their way per rail in the cars make it most uncomfortable for the other passengers, by singing, or rather roaring, quarrelling and fighting, &c. So much for rafts and raftsmen; but the timber shoots deserve a word. In order to get the timber down the 60-feet fall in the Ottawa, shoots have been constructed on the one side of the river; these shoots are inclined planes, into which the rafts float from a dock at the top. Two men usually go down with a raft, in order to steer it when it shoots into the river below, and they will take a passenger for a consideration; several of us went. You hold on to a post fixed upright among the timber composing the raft, and the door of the shoot being opened, the raft, the water and yourselves, all shoot down at a high rate of speed, and on reaching the bottom the nose of the raft rushes under the water and the raft makes a dive for some distance, and the crew and passengers get wet up to their middles. One turn each satisfied everybody, as we had all to go off to the Hotel and change all our nether integuments, hanging the same up to dry.

To-morrow morning a special train leaves here with the Delegation party for Toronto, via Prescott; I shall only go as far as Prescott, leaving the train there to cross

to Ogdensburg on the other side of the St. Lawrence, in the State of New York, and go thence to New York, so as to reach the latter in time for the election on the 8th, of the Delegates for the election of the future President. There are only two candidates, Abe Lincoln, the President now in office, and General McClellan, a General of some note and a favourite with the northern army.

I will write to you from New York, where I purpose staying at the St. Nicolas Hotel.

After the election I purpose going down the Long Island Sound to Boston, to see your friend Dr. J., who has written to invite me, returning to New York for the Thanksgiving Day, the 24th November, and then going on to Washington, returning to Montreal for Xmas.

Yours, &c.,

W. T. N.

ST. NICOLAS HOTEL, NEW YORK.

9th Nov., 1864.

MY DEAR FATHER,

I arrived here on the evening of the 6th after a tedious journey from Ottawa via Prescott, where I left the Delegation from the Maritime Provinces on their way to Toronto. I parted with some regret from the pleasant party in order to get to New York in time for the second election of President Lincoln. From Prescott I crossed by the ferry to Ogdensburg, in the State of New York, from the neighbourhood of which is exported, both abroad and also to New York and other large cities, an enormous quantity of fruit, apples (Newton pippins) and other gigantic and most attractive looking varieties, also pears, plums, apricots, &c.

There was an interval of 5 hours at Ogdensburg which is itself a most uninteresting place. A fellow traveller and myself hired a single horse buggy and had a drive, but we could find nothing to see and got fearfully jolted over the bad tracks (a very appropriate name by which roads are called).

The train took all night to get about 140 miles to Plattsburg, on the west or State of New York side of Lake Champlain, whence the steamers run down past Burlington, the largest town in the State of Vermont, (which State lies on the eastern shore of Lake Champlain) Ticonderoga, &c., to Whitehall, where the water ends. On the New York State or western shore of the Lake,

the hills are clothed with the pristine forests, denuded only of their best trees. About one-half of the area of the Empire State of New York is still in this condition. The scenery on Lake Champlain is very charming, although not grand. From Whitehall the railroad proceeds, via Saratoga, to Troy, the town on the Hudson nearly opposite to Albany, the Political Capital of the Empire State. Troy is about 150 miles north of New York, straight up the Hudson river.

Our night journey was rendered quite sleepless by the presence in the car of a party of about 20 men belonging to the army, who had been on leave and were now on the way back to their regiments. They had been well filled with whisky before they started, and had brought a grey hen with them, full of that spirit, and they sang and drank all night. The chief melody was a new song connected with the War, called "John Jones," or John Jones and his Bones. The hero certainly performed great exploits with his bones, but whether they were the bones used by black faced minstrels, when performing in England, or a portion of his own anatomy was at first not very clear. However, as the interminable song, which has very little tune, went on, it seemed that it was open to any singer to compose a verse of his own on the subject. One man, more imaginative than the others, invented a new verse, which they sang or rather vociferated and howled, for a couple of hours. It described how the hero Jones used the knobs of his thigh bones on the heads of the Southerners, which, although thick, were cracked as easily as drumheads. How the hero managed to stand, or whether he sat during the operation, the verse did not explain. I heartily wished Jones and his bones far enough, as I was tired and sleepy; but it was no use remonstrating, although a majority were in favour of a little quiet,

as the Conductor sympathised with Jones and his exploits, and would not interfere, so we passed a miserable night.

From Troy the Hudson River Railroad, which is united with the New York Central, ran much more swiftly down to New York, parallel to the Hudson, passing some beautiful scenery on that river. At West Point, 124 miles from New York, the river is nearly three miles wide. West Point is on the opposite or West side, on an elevated ground, and the Military Academy crowns a hill. Unless a river is over a mile wide, it is, in the United States, called a creek.

At the Hotel there arrived, shortly after myself, a telegram from Montreal announcing that the letter of introduction from the Foreign Secretary, Earl Russell, to the English Ambassador, Lord Lyons, as well as some others had come to hand and had been sent on by post. There arrived also an individual enquiring at the Hotel for me. I went out into the Central Hall to see who it was; it turned out to be the telegraph clerk who had transmitted the telegram, and what do you suppose he wanted? Why, the manuscript, as he called it, that is the autograph of Earl Russell. I told him that he was an impudent fool, that if I cut the signature off the letter, it would be useless as an introduction, and farther that he had no right to attempt to make use, for his own advantage, of information obtained in his official capacity as a telegraph clerk. He was most rude and persistent and followed me about after I had dismissed him till I appealed to the landlord and related his impertinent request. Several people at the office overheard; the landlord told him to go away and not annoy his guests; this was concurred in by all present except one self-sufficient youngish man, who thought that the letter would do very well without the signature and that I ought to give it to him, because a collector of autographs should be considered. This man

was smoking a curious pipe of which he seemed very proud. I answered, "Perhaps he is a collector of pipes you had better give him your pipe too," touching it. "What, take my pipe, why that is downright stealing," he exclaimed. His inconsistency created some amusement. One old fellow of a Quakery look, who hailed it seems from Philadelphia, said to him, in a solemn voice, "Retire, young man, and learn better the meaning of mine and thine." The two slunk away but the man with the pipe came back to complain that the other fellow wanted his pipe to start a collection, and would follow him about. We were all unanimous that a pipe collector deserved consideration and ought to have all curious pipes, including the one in question.

Yesterday was the day for the election of the Delegates who are to select the President for the four years from April next year.

The candidates were, as you are no doubt aware, Abm. Lincoln and General McClennan, but the latter has not any real chance.

The election of the Delegates for the choice of the future President (ticket No. 1) is tacked on in front of other five tickets for the election of the Governor and Lieutenant Governors of each State, ticket No. 2.—of the Members for Congress, No. 3.—of the Supervisor, No. 4.—of the Member of the State Assembly, No. 5.—of the Officials of the City and County, No. 6.—these Officials are eight in number, viz., the Sheriff, District Attorney, Clerk for City and County of New York, and four Coroners. Each Elector is provided with a bundle of these six tickets, or of six others issued by the opposition.

The six tickets are folded up with that for the President's Delegates on the top, the six being held together by a small elastic band. The bundle is long, narrow and thin, as Yankees usually are themselves.

See detailed description here following.

"PRESIDENT—Number One."

Folded to size as above.

The others follow in succession to No. 6. See contents printed below.

N.B.—The words above the short black lines are printed outside the ticket, those below this mark inside.

No. 1

For Electors of

**PRESIDENT AND VICE PRESIDENTS
OF THE UNITED STATES.**

**WILLIAM KELLY.
WASHINGTON HUNT.**

Here follow names of 31 Republican supporters of the two above Delegates.

STATE,—Number Two.

FOR GOVERNOR:

HORATIO SEYMOUR.

FOR LIEUTENANT GOVERNOR.

DAVID R. FLOYD JONES.

FOR CANAL COMMISSIONER.

JARVIS LORD.

FOR INSPECTOR OF STATE PRISONS,

DAVID B. McNEIL.

CONGRESS. Number Three.

FOR REPRESENTATIVE IN CONGRESS,

ELIJAH WARD.

Supervisor, No. 4.

FOR SUPERVISOR,

FREDERICK REPPER.

ASSEMBLY.—Number Five.

FOR MEMBER OF ASSEMBLY.

SEVENTH DISTRICT.

GEORGE W. MORTON.

CITY AND COUNTY—Number Six.

FOR SHERIFF OF THE CITY AND COUNTY OF NEW YORK.

JOHN KELLY.

FOR DISTRICT ATTORNEY.

A. OAKEY HALL,

FOR CLERK OF THE CITY AND COUNTY OF NEW YORK.

WILLIAM C. CONNER.

FOR CORONERS IN THE CITY AND COUNTY OF NEW YORK.

PHILIP MERKLE.

WILLIAM O'DONNELL.

PHILIP O'HANLON, JR.

OWEN KEENAN.

This is a pretty good dose of voting to do all at once. There were long tails of people waiting at the receiving holes of the Shantys where they could register their votes in each District. In the upper town the voters were respectable, sober, and quiet; but in the 4th Ward they were most drunk and uproarious and required a lot of police. They violently discussed politics, viz, Republicanism and Democracy, and two quarrelled and fired at each other with revolvers, which weapons are, it seems, very generally carried; the effect was that a man, 5 or 6 feet off me, was wounded in the neck; and was carried off bleeding.

Placards and flags were numerous displayed (according to the Yankee expression). One of the placards requested those concerned "To vote early and vote often," This puzzled me greatly, as it seemed to me that if extensively followed the whole thing would be a farce; but I believe that it is but seldom followed, as a heavy penalty is incurred if the duplicating voter is found out. One ticket agent wanted me to vote six times, I pretended to entertain the question, saying that if I voted three times for either side it would be quite impartial. This did not suit his views, he wanted all plumpers for McClellan.

I left that neighbourhood without delay, made one or two calls up town and then went to the Club to hear what the better classes had to say.

As the excitement here is great and violence very prevalent, I purpose departing to-morrow, per Steamer, down the Long Island Sound to New London, and thence per rail to Boston, returning here before the 24th, which is the Thanksgiving Day and the great domestic festival of the year. It ranks next after Independence Day, which is the 4th July; the Declaration having been read and proclaimed on 4th July, 1776, at Philadelphia.

Yours, &c,
W.T.N.

REVERE HOUSE, BOSTON,
12th Nov., 1864.

MY DEAR FATHER,

In accordance with what was said in my last letter, I left New York on the evening of the 10th, by one of the splendid double decked steamers, which run between New York and New London, and thence per rail to Boston. The route gives an excellent view of the City of New York, of the Harbour, of Brooklyn and of the shore of Long Island and of the Islands in the East River. The steamer had accommodation for about 200 passengers, each with cabins; meals were served on board in the saloon to such as ordered them, and in the evening a band of itinerant musicians performed. The Sound extends as far as Point St. Judith where it enters the Atlantic, and where the quiet waters of the Sound are changed for the stormy waters of the Ocean. At New London the passengers for Boston mount the cars to go, per rail, via Stonington and Providence, to Boston. The distance is about 220 miles altogether, about 120 by water, and 100 by land.

The behaviour of a number of the passengers on board, especially that of some of the ladies, was noisy and flippant, and the flirtations carried on were very numerous and many of them much too pronounced.

When we reached the wider part of the Sound, I went to bed to get out of the noise and excitement, wishing to have a little peace, the Election Excitement at New York having inclined me to a change to a quieter place like Boston.

We arrived at New London about 3 a.m., and then reached Boston before 8 a.m., after a much more pleasant ride than usual on railroads in the U.S. In the New

England States the forests have been cleared, and the views of the fertile valleys and hills, with chimneys here and there denoting factories, is pleasing to English eyes, by its more homelike appearance, to that of long stretches of forest gaps through which the railroads run for hours together further West.

Soon after my arrival I went to call on your friend Dr. Jarvis, who was most friendly and polite. He enquired how long I should stay. I told him about a week, so he invited me to go out to the suburb, where he and Mrs. Jarvis resided, to dine with them on the Sunday. He said we must arrange a plan to visit the various places of interest round about, and gave me an introduction to a leading Professor at Cambridge University or Harvard College, which is about three miles from Boston, also a letter to the Governor of the State, who also lived near Cambridge.

A Mr. H. whom I had met several times in Montreal was connected with an old and leading family here named Howe. The Howes have a Glass Works and Mrs. Howe has a reputation as an authoress. Dr. J. went with me to call, and we found the Montreal Mr. H. there. Mrs. Howe seemed well acquainted with your name, and was most kind and hospitable and gave me a general invitation to take tea and spend my evenings there, as I should probably find the Revere House uninteresting and dull. I went to dinner the same day and met Mr. Howe, his son and three daughters, handsome, cultivated and refined young ladies, and a most agreeable contrast to the New York fashionable Misses. I also met with something which I did not quite expect on this side of the Atlantic, to wit, Family Pride. The Howes were descendants of early settlers, and the whole family, especially the daughters, turned up their noses at the mere mention

of a New Yorker. The dwellers at New York they considered as unknown upstarts, of doubtful origin, and as people of small cultivation and with vulgar habits. No doubt the well to do classes of the Bostonians and a large number of the manufacturers in Massachusetts, at Lowell (the Cotton Mill centre) and other places, are much better educated than the general run of Yankees, who are mostly the sons, or in some cases the grandsons of settlers, who arrived in the States with their clothes and a small bag only. The system of State education was started early in the New England States and has produced excellent results. The contiguity of the Harvard College may also have had its effect on the Bostonians, they seem to know that they are a superior article, and they with genuine American independence and pride of feeling take care to keep the fact before you. At Boston, one certainly felt much nearer the mother country, both mentally and physically; the Yankee twang was much less apparent and frequently absent altogether. Their domestic system, their method of eating and drinking, their manners, their clothing, and lastly their climate, (which has a little damp in it,) resemble the customs and manners of Old England much more than those in any other place. I am told, however, that a similar feeling of family pride also prevails strongly in Philadelphia.

Boston, as the place where the Revolution first commenced, by throwing the Tea overboard, in 1773, and Philadelphia (where the Declaration of Independence was proclaimed, on the 4th July, 1776) consider themselves the aristocratic Cities and entitled to look down on all the places of later origin.

However, "retournons à nos moutons." I visited the Glass factory, and saw in their various processes, articles of glass adapted for general use, also others of ornament,

many of the latter both formed and engraved with great elegance and skill.

I went to Harvard and saw the Professor, with whom was a son who had been down to the War and was home for awhile on sick leave.

The Professor and his son took me through the Halls and Buildings at Harvard and kept me to dinner. The Professor, his wife and family (the latter were somewhat more youthful than the Howes) were cultivated people, who resided in a nice little house, in a plain sort of English style, not unlike the manner in which an Oxford tutor lives. I partook with the family of a plain dinner, of a joint of meat and apple pie, a thing I had not seen since I left the Mersey. Cambridge University or Harvard College is entirely Unitarian, and so also is Boston to a large extent. The Professor took me to the Governor's house, the Governor was out, presiding at some meeting or other, but the Lady-Governor or Governess, or whatever her title may be — (I am forgetting that the American Constitution does not mention titles; however, they have crept in, especially since the breaking out of the War, and now Generals, Colonels, Majors, Captains, &c. are all addressed according to their rank: the Senators are all called Honourables, in the same manner as the Members of the Upper Chambers in the various English Colonies.) — trotted me over her garden and kitchen garden, wherein flowers, shrubs, fruits and vegetables abounded in luxuriance. I was invited to dinner for the next day, and went of course. On this occasion the Governor was present, a fine looking, portly elderly gentleman, with white hair and whiskers, and very unlike the general run of lean and sallow Yankees. I addressed him as "Your Excellency." I had rather gathered, during my conversation with the Professor and others, that Governors of States were somewhat nettled

at the abundance of people formerly insignificant, who were now styled Generals and Colonels, &c., although destitute of military knowledge, but for having raised a certain number of men for the War and other similar reasons.

Both a General and Colonel (but neither of any military note) were present at the dinner, and the Governor seemed to appreciate the fact that I had duly noted the difference between him and them, and had placed him in his proper position.

As the joke seemed to go down very well, and as the Colonel who sat opposite me knew nothing about military matters, his manners also differing greatly from what is usual in an officer and gentleman, I thought I would keep it up, so when we went to the Drawing Room, I spoke to the Governor's wife of her husband, mentioning him as His Excellency and addressed her as Her Ladyship. I had obviously hit the right nail on the head, and when the General spoke to her as "Ma'am," she answered him as "Mr." and enquired of him how his candle factory was getting on. It seems he was a large manufacturer in that line. He was described as "great on grease and tallow."

Some musical pieces on the piano were well performed, two of the ladies also sang nicely.

Those of the party who were residing in Boston, were driven home in a carriage of the Governor's, which landed me at the Revere House, where I purpose remaining a few days longer, in order to visit Dr. and Mrs. Jarvis, as well as go over, with the former, a Prison and a Lunatic Asylum, of both of which he is the Visiting Physician.

Yours, &c.,
W.T.N.

REVERE HOUSE, BOSTON,

November, 1864.

MY DEAR FATHER,

On Sunday I duly went to dine with Dr. and Mrs. J., and found them a nice quiet and intelligent old cosy couple. It seems that Dr. J. "belonged Kentucky," as the saying is here, that is, he was a native of Louisville, and having there made a reputation as an adviser in Mental Disease, what we vulgarly call a "mad doctor," removed to Boston, where a more extensive sphere of usefulness presented itself. He is a visitor of two Lunatic Asylums, also of a Prison, all in Boston, and of several Asylums in various towns in the New England States.

In accordance with arrangements made, I went to Dr. J.'s chambers or consulting rooms, and thence accompanied him, first to a prison, very similar to that at Holloway in its arrangements as also in its rules, and afterwards to a private Lunatic Asylum. The Institution comprised several buildings, and was occupied by those who could pay or be paid for.

One house was occupied by a middle aged gentleman with whom we took lunch; he seemed all right enough and was most polite and quiet. The party comprised himself, his Secretary, Dr. J. and myself, and we talked of the War and of American Politics, and the host joined or rather led the conversation, in a very intelligent manner. Except by strict observation of a wandering of the eyes and a clutching motion in the fingers of the left hand, there was nothing particular about him; but it seemed that he was subject to periodical fits of violence which sometimes necessitated assistance being given to his Secretary (alias Keeper).

Dr. J. took me into the Ladies Department, and during my visit here I became convinced that elderly female lunatics are a caution and to be avoided.

After going through several Wards, which were graduated according to the means of the occupants, we went to an upper floor, where dwelt five elderly ladies with two ladies' maids, (they acted in the same capacity as the Secretary when necessary). While in their room, the Dr. was called down to see a patient who was in a bad fit, but I remained. The ladies stared at me, asked questions, which I answered very cautiously in a nasal twang, till suddenly one of them, who was it seems a widow, jumped up, seized me by the arm, shrieked out, "Why 'that's my long lost son who went to the Wars," seized me forcibly round the neck and embraced me with kisses and tears.

The "ladies' maid" on duty looked alarmed at me, and shook her head and put her hands down, with a peculiar motion, which I understood meant I should not resist. I took the hint and acted my part. "A-al'l reet Mar-r," said I; "I've been an' got back you see." "Ain't hurt, are you?" said she, feeling me on the shoulders and back, to see if any bones were broken. "Ah! no!" I said, which soothed her. So I said, "let's sit down and I'll tell you all about the War and General Mc Clennan." So we sat down together on a sofa, the other old Ladies gathered round to listen, and she kept a grip round me, her twitching fingers digging into my side in a tender part, rather painfully. However, I began to hem and to ha, and to hesitate and to look down, and to try to blush. So she urged me, "Wa-all my dear boy, what is it on your mind?" The ladies' maid had rung the bell for her colleague and had sent for Dr. J., who entered at this moment, looking very grave, however I gave him a comforting nod and said "all right Sar," and turned to

the old lady and said, "wa-ll Marr dear, there's something else I want to tell you different from the War." "Wa-ll, dear boy, what is it." "Wa-ll Marr dear, you see it's raythur a delicate subject." "Dear me, what can it be," interposed one of the old ladies, with a violent movement of her fan. So I looked down, and then suddenly said, "Wa-ll Marr dear, I've been and gone and got spliced since I saw you." Oh Mys! and great astonishment all round. Dr. J. looked uneasy, I gave him a quieting look, and proceeded. "Such a nice pretty gall, wouldn't you like to see her?" "Oh! yes," they all called in a general chorus. "I'll go and fetch her then," I said; so I got up and walked slowly towards the door, which ladies' maid No. 2 opened. Dr. J. gave me a thankful and pleased look, so I passed out, and he followed.

He patted me on the shoulder, and said "very well done; but where's the young woman," smiling; "here or in Europe?" I caught the idea, and said I think she would be safer in Europe; you had better return and inform my dear Marr, that I have gone down to the harbour, to sail by the boat that goes this afternoon. "Good idea, so I will," and he turned. I said quietly, "wait a minute, let me get clear off, down this stair first;" he replied, "Oh! yea," and I tripped on my toes quickly and quietly down the stair, saying, "I'll go to the Porter's room," a room I had seen near the entrance, and wait. "All right," he said, and turned to go back to the old ladies room. He joined me in about 10 minutes, looking relieved but grave. I don't think he had had a good time of it. My Marr was not impatient, but one of the cute old ladies asked sharply, "but where's he going to sail to?" "Oh! down the coast," answered the Doctor, and continuing the subject with the skill of his speciality, "to Atlantic City, where his wife is enjoying sea bathing." "Don't believe it," says the suspicious old woman. But my Marr, thinking that

this was a slur on my veracity, snapped at her and told her to shut up, it was she who told lies, not I. It seems that the other old lady was given to invent improbable stories on all sorts of subjects. The Doctor, with judicious skill, suggested to my Marr, that she would probably like to remove from her present residence and go to another, to prepare a nice place for me and my new wife.

She assented with delight, he offered his arm and led her out to another set of apartments a floor lower. As it happened, a room near by was being repaired and was nearly clear of furniture, so she was led in, and it was suggested by the Doctor, seconded by the ladies' maid, that it would give her much pleasure, no doubt, to fit up the room for our accommodation on our return. She and the ladies' maid are talking at a great rate as to the furniture and articles necessary. So she is happy and quite lucid at present, and the Doctor hopes that it may, perhaps, restore her mind, if they can only keep it up long enough to prevent a violent reaction. I suggested that I had better depart before I got into any more scrapes. Dr. J. thought I had not done badly, and had already, in about half a day, got a mother and a wife. So I shook hands and hoped he would take care of them for me, as I was not of age and my means were small.

He smiled and nodded and we parted, he calling out to say, "I am going to the Howes this evening, to talk about the Sailor's fare, will you be there?" "Oh! certainly" I said, "I have a general invitation from Mrs. Howe for any, or every evening." When I got outside, I began to feel somewhat giddy, from the excitement I suppose, and called a vehicle from a neighbouring stand to drive me to the Revere House, where I went up to my room, bathed my head and sat down to reflect on the whole matter, I felt very curious as to how the old lady would get on,

and although it was done under a necessity, I did not quite like having deceived her. The idea of a wife was a matter I had never contemplated before, being only nineteen, and I came to the conclusion that I would postpone the matter for six years, if not longer.

After taking a stroll down to the Harbour, to divert myself, and having a little to eat in the dining hall, I went out to walk to the Howes to tea, but here I got into a difficulty. I thought I had to go some way along the main street and then turn up a little hill to the right; so I walked on as straight as the street or streets permitted, and in about fourteen minutes found myself exactly opposite where I started from. The streets form it seems nearly a semi-circle. I returned to the Hotel and asked the clerk in the office if there was a plan of Boston in the Hotel. He told me there was none, but that I could get one for half a dollar down the street. I went down the street, found a shop and paid half a dollar for a plan, took it to an Hotel, and found on examination that it was an old one and quite useless.

NEW YORK HOTEL, NEW YORK,
26th Nov., 1864.

MY DEAR FATHER,

The 24th was the Thanksgiving Day, which is kept with some ceremony and solemnity—as a sort of substitute for Christmas Day, which is not kept. Turkey is the favourite dish for the celebration, and I assisted in curtailing one at the house of Mr. Archibald, the British Consul-General, who resides in West 52nd Street.

The system of calling streets by numbers seems peculiar, but has its advantages, as it enables anyone, including strangers, to estimate the distance and relative position of the various houses and streets.

The general arrangement of the Avenues (which run at right angles to the streets) and the streets is very simple. New York is built on a triangular island, called Manhattan Island, running into the Hudson River, some seven miles from Sandy Hook, where the Hudson joins the sea. The Haarlem, a small river, runs across the base of the triangle and completes the insulation of Manhattan Island. The extreme point of the triangle is occupied by an old fort called "The Battery," which name it bore when the flag of England flew over it. Running up the island, or more properly, peninsula, which gradually widens, there are nine avenues, viz.: Broadway, in the centre, starting straight from the Battery; Avenues No. 1, 2, 3, and 4, on the right or Eastern side of Broadway, and Avenues 5, 6, 7, and 8 on the left or Western side. Broadway bends Westward after 10th Street, and crosses 5th, 6th, 7th and 8th Avenues diagonally, terminating at 59th Street, 8th Avenue. The streets, except those in the lower end of the Broadway, such as Wall Street, where the Stock Exchange is carried on, are numbered, and

run up 152nd West Street and 154th East Street, or thereabouts, — the fact of their being East or West being determined accordingly as they lie East or West of the road leading in continuation of Broadway to the Central Park, which will some day be a fine park, when the trees grow up, but is now a vacant lot, laid out and planted. It has a lake, a ride, drives, and the various accessories usual to civilized parks. Fifth Avenue consists entirely of fine private mansions, as also does Madison Avenue, on the other side of Broadway. The houses in Streets East and West, 20 to 46, are nearly all residential.

Yesterday, or rather last night and early to-day, Saturday morning, was a time that will long be remembered in New York. I went to the Academy of Music, that is the Opera, with the Vails (Mr. and his two daughters) and during the performance, about 9 p.m., a most mysterious thinning took place among the audience who occupied the stalls and the boxes; messengers came, whispered something, and the person addressed started, took up his hat and coat and promptly or even hurriedly departed, generally without saying a word about the news.

It however crept out that several Hotels were on fire, also Barnum's Museum, and that fires were breaking out in various places clearly of an incendiary character.

It seems that there had been a mysterious report that the Southerners, as a desperate method of retaliation had sent emissaries into the Northern Cities to set the large buildings on fire. The Astor House, St. Nicolas, Fifth Avenue, and Howard Hotels were on fire, but report said that the fires had in two or three cases been easily extinguished. The papers this morning give the number of the room, 137, set fire to in the St. Nicolas Hotel, which was the room I occupied in that Hotel when previously in New York. I am now at the New York Hotel in Broadway, or rather

in a house in a side street belonging to it. All the Hotels are very full just now by reason of Thanksgiving Day and I could not find room at the St. Nicolas. We left the Opera House and I thought it best not to go near the Hotel as my clothes were not in it but across the street. A New York fire usually means a row between the fire brigade and the roughs and often a little firing free with revolvers, so I went to the Union Club in Union Square, on the books of which I had been entered as a member for a month.

I stopped there till 1 a.m. and then walked home by the back streets, avoiding Broadway. I found a large and excited crowd in the front of the Hotel, also a force of police. The crowd having a notion that the incendiaries had their headquarters at that Hotel seemed disposed to do damage. About 2.30 a fire was announced somewhere up-town and the bulk of the crowd departed to visit it, so I went to bed, but cannot say I slept. I had packed up nearly all my traps, and I left the blind up so as to get early sight of any glare from the hotel building opposite. No fire, however, took place there, from which many deduced that this was by reason of the emissaries being there. I avoided going in and got my breakfast at an eating-house some way off. Since I came to New York I have been very busy, and as I think I am safer out of the streets today I will send you a good long letter. I went to Brooklyn to visit Mr. and Mrs. H. M. Beach; they have two boys, and nothing would satisfy the elder, a lad about 14 years old, than to go to the army as a drummer boy, so, to his parent's great grief, he has gone. He is all right so far. Brooklyn is a handsome suburb of New York, situated at the West end of Long Island, on rising ground. It was originally settled in 1625, near Wallobout Bay by a party of Walloons (from the Netherlands) and during the revolutionary war, the battle of Long Island was fought in 1776,

on the heights behind the town at which the Americans were severely defeated. There is a beautiful drive along a Boulevard, 80 feet wide, from Prospect Park to Ocean Parkway, $2\frac{1}{4}$ miles on the sea shore, opposite Coney Island. Mr. S.—, a gentleman to whom Mr. H. M. Beach introduced me, interests himself in educational matters and took me to two of the State schools. They seem to be conducted in an attractive and successful manner as regards teaching strictly on the secular principle. Object lessons are used, the children, both boys and girls, are clean, but lack the ruddy hue and healthy plumpness of English children.

The school rooms are large and generally high and the classes often contain a large number, say between one and two hundred, which seems to me rather too many; but the children are kept in order by the assistants. In the girl's school, instead of the girls wandering in piecemeal, they collect in an adjoining lobby, deposit their outer clothing, and get their books, and then come tripping in in four rows sideways through two large doors to a dance tune played on a piano on the platform. This system seems to successfully get over the disputes about places so very usual in many English schools. The rows of benches with narrow desks in front were very quickly occupied and the lesson commenced.

The Wharves on both sides of the River Hudson, which is over one mile wide, are very extensive, especially those on the Jersey City side where the Transatlantic steamers all lie and land their passengers on their arrival. This is very inconvenient to the latter who have to hire one of the two-horse broughams to take them across the steam ferry and up Broadway to their hotels. These carriages charge high fares.

Tramways are laid on all the Avenues but are not allowed on Broadway. They come down the various avenues and

then turn into a street leading to Broadway, halting close to the latter. There are some omnibuses in Broadway, running to the Central Park, which are worked solely by the driver, who has a leathern strap running along the roof to a loop round his foot, by which he opens and closes the door; each passenger has to pay as soon as he enters. Tricks are sometimes played by wedging the strap where it passes through its groove in the roof, the driver believes the door to be shut, as the strap seems tight, and the omnibus full; but when he turns round he probably finds the strap cut, the door wide open, and the omnibus empty except one sleepy old lady, and that he has been refusing passengers when nearly empty.

Mr. P., an influential merchant here, who lives in a handsome house in Madison Avenue, to whom I was introduced, takes much pains to inform me as to the virtues and advantages of the Yankees and the defects of the Britishers. He has a tall opinion of himself and his powers of conversation and says that Britishers are a glum lot and without powers of conversation. I went to call at his house and found that Mrs. P. was a Scotchwoman, her Glasgow accent was quite a treat and a relief from the nasal twang in use in New York generally. I remarked upon her nationality which obviously pleased her, she said she was a MacIntosh and I was invited to dinner for the following day. Mr. P. and an adult son, who was as glum and silent as a Britisher, was present, also a daughter about 18, who beat her father out and out in powers of conversation; she talked so much and so fast that between them no one else got a word in. I listened quietly for some time to various disquisitions, all directed at the Britishers, their language, manners, education, &c. I got rather tired of this and started a turn with Mrs. P. as to whether there were any other MacIntoshes in New York, this set her off and stopped the daughter, she explained that she was the most notable and ancient Mac-

Intosh in the United States. She prided herself at having preserved her original accent as against the nasal method prevailing generally. She expressed great pride in her ancient lineage, whereat Mr. P. got tired of being silent and announced that he belonged to the Royal family of Adam and appealed to me as to whether he did not greatly resemble in his position and kingdom that man of ancient days. Thus called upon I remarked that I saw one point of resemblance and one point of contrast, 1st, that his Kingdom was like that of Adam, limited to his own family; and, that his costume in no way resembled that of Adam, but was in every way most refined and correct. Mr. P. at first looked gratified as he prided himself greatly on his coats which were made at Paris and on "the sweet things in vests" which he bought at the extensive marble halls of the great draper and outfitter Stuart, in Broadway; but when he saw that Mrs. P. laughed at the contrast between his costume and Adam's, that the silent adult son booed spasmodically, that the daughter stopped her rapid tongue to giggle heartily, he arrived slowly at the conclusion that he had been made fun of; however he admitted that "I had him there" and that I was the first Britisher who ever exhibited any powers of conversation worth mentioning. This was no doubt gratifying but the opinion is not, in my eyes, worth much. He stroked caressingly the broad white expanse of "the sweet thing in vests," surveyed the face of a large gold French watch, and the party adjourned to the drawing room.

Mr. Strong, the Chairman of the Sanitary Commission, an Institution supported by Voluntary Contributions, and directed to better and improve the condition of the wounded, and soldiers generally on service at the War, lives with his wife and two children in Union Square, near to the Hon. Mr. and Mrs. Ruggles, Mrs. Strong is an Englishwoman, tall and ladylike, and is a very leading

and fashionable lady. She rides on horseback, which is not very usual among New York ladies, and is delighted to have gentlemen to ride with her. The Commandant of New York, an elderly Colonel, rides in the Central Park with her, and she invited me, after finding out I was a Yorkshireman, to accompany them; so I fished up a horse, and went with them next day. The horse was a hard mouthed animal and fresh, so I suggested a canter; Mrs S. was quite agreeable, and went off into a canter and then into a gallop; the poor Colonel was soon left behind, and we went at a gallop nearly round the Park, I should say two miles. It was a fine cold day. We found the Colonel again where we started from, looking very cross and obviously very chilly, from the colour of his nose.

We went back to Union Square, where the Colonel was confronted with two cocktails, made by the man servant. Now cocktails have nothing to do with cocks and hens, a cocktail is a mixture of spirits, bitters and water, and is very popular in the various Hotel bars, frequented by the gentlemen of various ages. The Americans but seldom drink wine at meals, but take drinks, such as cocktails, mint julep, sherry cobbler and other mixtures with curious names during the morning and afternoon, and I think that this unhealthy custom, as well as that of eating very fast, (say four courses in ten or twelve minutes,) as also that of taking all sorts of dishes, including sweets for breakfast, accounts for the sallow complexion of the middle class, as also the prevalence of dyspepsia, followed by an enormous consumption of pills and bitters, which are largely advertised on every wall; by largely I mean to include both size as well as frequency. Holloway's and Parr's Pills appear in gigantic letters, they no doubt do a very large business in the United States.

At Breakfast a dish called Buckwheat Cake and Molasses is usually employed as a finale. Buckwheat Cakes are hot thin crumpets made of the small black wheat, and Molasses means a fine juice of sugar, much brighter in colour than English treacle, and of a better flavour.

The Americans consume a large quantity of sweets and sweetened condiments, and the trade from the Sugar Islands in the West Indies to the United States is very considerable, as also that in raisins from Spain.

I may as well here describe that important element in American railway locomotion, viz., a Railroad Car, pronounced "Keer." It is a sort of exaggerated omnibus, varying from 60 to sometimes nearly 100 feet long. The railroads (except those in Canada, which are of the 5-foot 6-inches, Irish gauge) are all of the old Stevenson gauge of 4-foot 8½-inches. The body of the Car, is about 8-feet wide and 9-feet high, sometimes with a ventilating roof in the centre, about 8-inches higher, which has numerous little side windows suspended on their centres which cant thereon when open.

There are two doors, either sliding or shutting, one at either end, and next to these are two places for sanitary purposes; ladies one end, gentlemen the other. Next comes a filter of iced water, and I heartily wish the iced water filter could be done away with, for it is the cause of a great nuisance. The ladies and children drink enormous quantities of iced water, in fact never seem to cease drinking when on board of railroad cars. There is a passage down the centre of the car, on either side of which are benches constructed for two persons. These benches have hard stuffed seats and backs, which latter rise no higher than one's neck. They are in most cases reversible, so that you can, by reversing one back, make a sort of coupée for four persons seated opposite to each

other, otherwise all the backs run in one direction, and the passengers sit as if in portions of pews on either side of a narrow side aisle, in a Methodist Chapel. The side windows have sun shutters; that is a frame with narrow wooden bars, fixed at an angle of 45° , very like a venetian blind, but much smaller. The Yankees often keep the windows unnecessarily shut, which creates a heat and a sort of sour odour, very similar to that to be smelt at a Ragged School, crowded with children of uncertain personal cleanliness.

The Cars run on two trucks, placed each under the Car near to either end. The cars rest on two centre pivots which are in the centre of the frame of each truck, there are also metal rubbing pieces on the outer edges of the truck-frames, in order to support similar rubbing pieces fixed underneath the sides of the Car over those on the trucks. The distance between the pivots and the radial motion allowed by them enables the Cars to run round very sharp curves safely. In some of the Cities the Cars are drawn through the streets to some other Railroad by horses, and the rectangular corners of the streets are turned. The motion is curious, the leading truck, if the turning is to the left, begins to go round the corner, but the car ends proceeds nearly straight on until the truck has gone round the curve when it suddenly develops a motion sideways and follows its leading truck. During the turning on a sharp curve the truck will be at an angle of sometimes 35° with the body of the Car. The trucks have always at least four wheels, two on either side, generally cast iron wheels chilled in a patent fashion which renders them very strong and nearly as hard as steel; the axles are of wrought iron and project through the wheels as on English railways and support the cross superstructure of the trucks on the centre of which the strong iron pivot is fastened, on which the body of the great Car rests.

Chains are attached to the body of the Car and to each corner of the trucks to prevent the latter from revolving too far under the Car, but if the truck leave the rails, it often turns round almost to a right angle, the chains being torn out and broken. The truck arrangement is intended to spread the bearing surface so that the weight on the rails is distributed.

The weight of the Locomotives is similarly dispersed, the fore part runs on a bogie with four quite small wheels, then follow the driving wheels, usually two on either side coupled by an external coupling bar at the ends of the cranks, as in England. Most of the Locomotives have outside cylinders, that is the cylinders are not under the boilers as in the old Locomotives, but outside on either side. This gives cylinders of greater diameter and enables the valves to be outside also; but it renders the motion of the engine less steady as each cylinder is at its greatest power when the other cylinder is at its least power, the cranks are 90° or $\frac{1}{4}$ th of circle the one behind the other, so that one piston is in the middle of its stroke when the other is beginning or ending. The piston has to travel up and down the cylinder for one revolution of the crank, so that twice the length of the crank from the centre of the axle is equal to the available length of the cylinder. The tenders run on two bogies.

The breaks are on the end platforms of the Cars and are worked by a revolving wheel which has a ratchet to prevent its running back. Some of the locomotives are fitted with an axle on the engine with two small rough wheels which can be brought into contact with the driving wheel by means of a lever worked by the engine-driver; the contact with the driving wheels causes the axle to revolve and twists up a chain attached thereto, which chain runs along under all the Cars and is attached

to their respective breaks. This arrangement enables the driver to put on the breaks by the aid of the driving wheels, which, of course, continue to revolve some long distance after steam is shut off, and thus the momentum of the train is made to consume and reduce itself till the train comes to a halt. The lever is then lifted and the axle revolves and the chain is drawn back by the tension of the breaks, so that the latter get clear of the wheels by the loosening of the chain. The system works I am told very fairly, but the chain is liable to snap if the tension is put on too suddenly and too strongly.

The distribution of the weight both of Locomotives and Cars over a large surface is rendered necessary by the light nature of the rails, sleepers, and track on all but the Great Trunk lines. The rails do not usually exceed 60 lbs. per yard or thereabouts and are sometimes under 60 lbs.; the rails on English lines are between 70 lbs. and 80 lbs. and sometimes the double heads exceed 80 lbs. per yard. Rails are, of course, dearer here than in England, in fact are chiefly derived from the mother country and have an import duty to pay here on arrival. The duty has enabled the Yankees to erect and open rail-mills to make for themselves, but, of course, the extra price comes out of the pockets of the railway companies. The rails are fastened to cross ties, called in England sleepers. The flat bottomed rails which are the most common, by means of bolts through the bottom flanges or by nails. The earthworks are usually slight and the lines follow the surface of the country, running up hill and down dale according to the nature of the surface. The gradients are consequently often very severe, 1 to 60 is considered here "quite mild" and some are double that. This is another reason why the Car system is adopted, *i.e.*, in order to carry the largest number of passengers with the least dead weight. The dead weight

comprises the Locomotive (which seems rather a contradiction of terms when it provides the tractive power) the Cars and baggage cars, and the officials. A Car here will take from 60 to nearly 100 passengers or equal to 10 first-class compartments of English railway carriages, or if you mix 1st and 2nd and put into each compartment 6 persons, it would require $7\frac{1}{2}$ compartments, and as the English carriages have only three or four compartments each, that it would be equal to two carriages to a small car.

The cars have no spring buffers at either end, but have a centre hollow buffer projecting but very slightly beyond the end platforms; these centre buffers are attached, or linked up by an elongated link, which enters the mouth of either centre buffer, and is retained there by dropping two iron pins through either end of the link. These pins, when the train is not in tension, can be lifted easily, and cases have been known where passengers have lifted a pin and left the cars, in rear of the pin, behind altogether. A car is, no doubt, a ready means of transporting a large number of passengers, all crowded together, in a long and narrow saloon; but there are disadvantages, there is no privacy, nowhere to rest and sleep, the fellow passengers and their children can walk up and down the middle aisle at their pleasure, and keep every one in a state of look out after all their property which is not in the baggage van.

When you put baggage into the van, you get from the Baggage Master a brass check, about the size of a penny, the check has a slit in it, through which is passed a thin leather with a slit in one end, this leather is attached to a duplicate check, and the duplicate is hung on to the several articles of baggage, by passing the leather behind the cord or handle, and then slipping the check through the slit,—this hitches the check safely on to the luggage.

On your arrival at your destination, you need not wait to claim your luggage, but go to the Hotel, give the check to the Railway Porter of the Hotel, who will go to the Dépôt and exchange it against the duplicate slung on to the luggage. The initials of the name of the Railway Company or Companies over whose line or lines you are travelling, are stamped on both checks. A check from New York to Chicago varies according to the route taken, but in all cases it is quite an essay. In one case it would be marked H.R.R.R., N.Y.C.R.R., L.S.R.R., with a number thereto; meaning Hudson River Rail Road, New York Central Rail Road, and Lake Shore Rail Road. The first line extends from New York to Troy, 150 miles; the second crosses the river to Albany, and runs on to Buffalo, 280 miles; the Lake Shore and Michigan Southern runs from Buffalo to Chicago, 540 miles. The Michigan Central runs from Detroit to Chicago, 282 miles; and a line runs from Detroit to Toledo, 62 miles, on the Lake Shore line. The Baggage Checks by the Suspension Bridge route would be N.R.R.R., N.Y.C.R.R., G.W.R.R., M.C.R.R.

I think that the foregoing pretty well exhausts the railway plant question as regards passenger trains; the goods, minerals, corn, &c., I will treat on another occasion.

There is, of course, in this Republic, only one class of car, viz., the 1st class. In Canada there are a few 2nd and 3rd class cars, for the raftsmen and the rough customers, but here of course all the world are the equals of each other. All extreme Radicals should come and try fourteen days constant railroad travelling here, and they will undoubtedly return regular true blue Tories.

Everyone fends for himself, and impudence and sharp practice of course gain the day, against decent honesty and good manners. The men, or as I suppose I must

call them gents, "expectorate considerable," whereby the floors are not improved; and if a window happens to be two or three inches open at the top, they expectorate across you through the aperture, and if you remonstrate, you are put down by a statement "that they guess they are safe at that distance." In order to prove their equality, the more presuming ones address, or rather attack, any of those who look quiet and harmless and unprovided with revolvers, ask questions about hats and clothing; look over a book or paper you may be reading, and if remonstrated with, their surrounders declare them to be in the right, as they "are doing a politeness." On some lines men come on board with magazines and books to sell, and if you buy one, take care you keep it in your pocket and write your initials on it; for if you take a doze by leaning your head against the side of the car, one of the children or one of the men, will take up a book lying on the seat beside you, or even in your lap, move to a seat some way off to read it; when you wake up, if you take a round to recover it, on seeing it and asking for it as yours, you are told it is not, but that the reader has found it. It often requires great firmness and courage to get it back again, unless you have a party with you. While travelling between Chicago and Detroit, I bought a book, and when the cars stopped (the word train is unknown) at Kalamazoo, where time for refreshments is allowed, I left it in a corner seat in the car, covered with my travelling cap, and on going back found them both gone, and the seat occupied by a stout lady. I informed her that I had been sitting there all day, and had left my book and cap on it in order to retain it,—she said that nothing was there when she entered the car. Her husband, a respectable elderly individual, opined that no doubt some of the children or passengers had purloined them. I went along the car and found my cap on the head of a

dirty boy, who was, it seems, travelling with his parents, a vulgar impudent couple; the mother was reading the book; but, as I approached, she ceased, and put the book under her dress to hide it. I had written my initials very clearly on the first page. I asked for it, but she denied having any book,—I said "I saw you reading my book, which has a blue cover, and I demand its return." "You shut up and go away," said the husband. "Not without my book," was my reply. I took possession of my book, and while holding it up, to shew those looking on, that my statement was correct, the husband, who had risen to his feet, seized it with both hands, and pulled at it fiercely. I held on for a moment, and then suddenly let it go; whereupon the man went violently down on the seat. The book had fallen, so I asked the husband of the lady who had taken my seat, to pick it up, which he did, stating, solemnly, after looking at the initials on the first page, "It is clearly yours, and ought not to have been dishonestly removed." I was retiring when some one said—"Oh! but there is the cap also." I took the cap off the boy's head, but immediately threw it at him. "Here, keep the cap," said I, "but I'll have this straw hat as compensation," and took up the husband's straw hat, which had fallen off when he bumped down. "Oh! but it's a new one," said the wife; "so much the better, it will be clean," was my reply. "Sarve em right," said one. "You keep your fingers from picking and stealing," said another, to the lad. Another, who apparently took more interest in the scuffle, said to the man, "Guess you got nearly scragged." The man, who it seemed was of German origin, growled, and turning to his boy, commanded him to go and get him some water. The lad said "No, I shan't," sulkily. His father rose and gave him a sound box of the ears, whereat he howled,—the father's breath was still only partly restored; he

sat down again, saying "water, water," which hearing, I took him a glass, gave him some and then handed the glass to the wife, and proceeded to open the window. The water and the air brought him round. He sat awhile looking very gloomy and scowling at his wife and boy, and then broke out into violent vituperations against them both, for stealing Books and Caps, and getting him nearly choked, and losing him his new straw hat.

I had gone back to the end of the car, with the gentleman and the book, his stout wife offered to vacate my seat, which offer I firmly declined, but sat down near.

The gentleman was looking grave, and remarked—"I guess, young man, that you are an Englishman. Are you out here on business?"

I replied that after being educated at King's College, London, I had been sent out to America and Canada by my father to travel and finish my education and get the rough edges taken off. "I am sorry that you should have the tale of the pilfering of your property of to-day to carry back with you to the old country." I replied, that of course one could not expect very refined manners in the mixed community which travels in American Railroad Cars, but no doubt as time went on manners would improve. "Probably you have travelled in Europe?" I replied that I had travelled through Northern and Southern Germany, Austria, Bavaria, Saxony, Wurtemberg, up the Rhine and down the Danube, also in Belgium and France. "Did you ever meet with a similar case to that of to-day?" "Never, nor heard of one." To finish this subject, I asked the gentleman to return the straw hat to the man, with my sympathies for the trouble caused him, by the misconduct of his wife and boy. He assented and delivered the hat; the man was much pleased, and sent a message apologising for the way I had been treated; it had been quite unknown to him, and he had been

asleep, or he would have interfered. The gentleman returned, and uttered words in approval of my conduct in returning the hat, as chivalrous and befitting an educated Englishman. We conversed more or less until we arrived at Detroit, where we disembarked, he shook hands, as did the lady, with thanks for the seat. The gentleman gave me his card from which I learnt that he resided at Albany (New York) and was a member of the New York State Legislature. He invited me to call if I happened to stop in Albany.

Yours, &c.,

W. T. N.

OIL CITY, PENNSYLVANIA,

3rd December, 1864.

MY DEAR FATHER,

You will see by the heading that I am at the chief town of the Oil Region. I left Philadelphia on Wednesday evening and travelled through to Corry (the junction of the Philadelphia and Erie, and the Atlantic & Great Western railways), where I arrived about 5 P.M. on Thursday. I then went on by the Oil Creek railway, a branch line of the Atlantic and Great Western, to Titusville, the town situated highest up Oil Creek, being about twenty miles above its confluence with the Alleghany river. Titusville is a very thriving little town, with a good many wells in the neighbourhood, but mostly rather poor pumping wells, giving from five to fifty barrels per day, the average being about fifteen per day. Titusville is about fifteen miles from Corry. The railway continues down the Creek, for six miles, to a place called Shaffer's Farm. The Oil Creek is a stream about the size of the river Lea, formerly clear and limpid, but now oily and odoriferous. Above Titusville are a number of ponds, in which the water is collected and confined by means of dams, which are opened once a week; this influx of water called a "Pond Freshet," raises the water in the river, and enables the laden oil barges to go down. At Shaffer's Farm, one can either ride down to Oil City, or come down the Creek by boat; I took the latter course, and very much wish I had taken the former, for yesterday I was eight hours on the river, in an open flat boat, coming sixteen miles. I did not get here till nearly 9 P.M., nearly four hours after dark. It was one of the biggest swindles I ever saw. The boatman collected the dollars all round, and just as it was

getting work, landed about eight miles above Oil City, leaving only a lad, who did not know the river. The boat constantly required four people to steer it, and sometimes six. We had a very heavy load when we left Shaffer's Farm, and got aground before we were out of sight of the landing-place, and remained there nearly an hour. The boats in use here are very similar to the flat boats on the Danube. The one we were in was about sixty feet long, twelve feet beam, and twenty inches in depth, quite open, lumbered up with baggage, with a few muddy boards to sit upon, everything soaked with rain, and altogether most comfortless. At first there was a great crowd of passengers and baggage, but these gradually thinned, till when it became dark and the boatman landed, there were about eight left, including two women. We were naturally very angry when we found that the boatman was gone, but it could not be helped, so three of us assisted the boy to manage the huge concern. We did it so well that we got aground three times in a mile, when fortunately a man came on board who knew something about the river, otherwise I am quite sure we should never have reached Oil City last night at all. As it was it was pretty bad, we had been aground so often, and bumped against so many rocks that the boat had six inches of water in it. The boatman left just before we reached the rapids and the bridges, and the worst parts of the river, so that we had to exert ourselves a good deal to keep clear of the various obstacles; and that I am not laid up to-day with a very bad cold I attribute to the exercise, and to the warmth of my pea-jacket. I was certainly tired last night; four hours' hard work in six inches of slush and a pelting rain, was calculated to make me so. However, I am all right to-day, and am very thankful that I had not to sleep in my wet clothes in some oil shanty on the bank. As to hotel accommodation here,

there is none; the hotels have grandiloquent names, and that is all. I have had to sleep three nights in my clothes, or most of them, in half of a bed, and was very glad to get that. The food is impregnated with oil, and the water is so oily that it is undrinkable. I think if I had known beforehand what a very rough country this is, both in itself and its inhabitants, I should not have come, but now I am here I am very glad, for I verily believe that this is the most extraordinary region on the face of the earth. On each side of the Oil Creek, on the narrow strip of ground between the high wooded banks and the water, Derricks are placed among the trees, (i.e.) those of the *ancient forest* which *have* not been cleared, almost as close as they can well stand, each with its little shanty and puffing steam-engine, drilling and pumping, puffing and panting, all day and all night long. The mode of proceeding is explained in one of the papers I sent you with the packet of pamphlets.

Flowing wells are not usual; we passed a few yesterday on the banks, surrounded by huge oil vats, and with oil barges lashed to an old stump on the bank. The oil barges are large flat boats, between sixty and seventy feet long by fifteen and twenty wide, and thirty to fifty inches deep; they are divided into cisterns, into which the oil is run in bulk, and so floated down the Oil Creek to Oil City, and thence down the Alleghany to Pittsburg. The produce of the pumping wells is generally sent in similar boats, but in barrels. The boats which take the barrels down do not return, but are broken up for fire-wood, and as the timbers are more or less soaked with oil, fetch a high price. The number of abandoned wells that one sees is very great. Only one derrick out of six seems to be working, and only about one well in a dozen produces anything very great.

I should say that oil seeking is about the worst business

here ; inn-keepers, publicans, grocers, carpenters, and all other traders who have anything to do with supplying the region, get rich in three or four years, and often sooner, but the prizes in oil seeking are few and far between. Oil seeking, like most things of a similar precarious nature, is gradually passing into the hands of large companies, who take extensive tracts of " Oil Territory," and sink and sink again till they find oil, and are generally successful in the end, when carried on in a *bond fide* manner: but a great number of the new oil companies are bubble concerns got up by designing projectors for the sake of gain, and their much-vaunted " Oil Territory," often does not exist at all, except on paper.

Prices here are of course very high ; hotel board is dearer than in New York, and of the worst description.

Every one comes here with the intention of making a fortune, and seems to abstain from washing, combing, or brushing until it is made, when I suppose he buys a new suit of clothes, and throws the old ones into the Creek.

I had heard of mud previously, and I thought I had seen some of it, but I was quite mistaken. What London is in comparison with Montreal, Montreal is in comparison with the Oil region. The carts sink up to the axles, and the horses to their bellies in liquid slush ; the stirrups are constructed like half a boot with a point, as if to make a way through it, for the feet of people on horseback are often in it. Long boots, waterproofs, each, all, and everything covered with mud are all one sees. But to return to the Hotel, or rather the building so misnamed. It was a very rough and comfortless place, but choked with people. The only accommodation we four damp and hungry navigating individuals could find was one small bed in an upper room, which contained three other beds, and three straw mattresses in the loft over the stable (there were twenty-seven mattresses in the loft all

in a row). We tossed for the bed upstairs; but the man who lost the first toss looked so woebegone, and was so ill and exhausted, that we decided to let him have it. The landlord said it was too late to have any supper prepared, so we had to turn out in a heavy rain to find some grub; but fortunately hit upon a sort of place kept in a cellar by a darkie, where we found some very decent cold beef, and brown bread and beer, on which we made a good supper. The place was nice and warm, and two out of four elected to sleep there on the benches; the other two, viz., the poorly one and myself, returned to the hotel,—he went up stairs, and I prepared to turn in. The three petroleum lamps in the long dormitory emitted a strong smell and a weak light, but even by that one could see that the company present were a rough lot. I made myself a pillow by wrapping up my pea jacket, putting my revolver inside; put my overcoat on the floor, rather underneath the mattress, and lay down on it, with the mattress over me;—this was a precaution against the expectorating habits of the oil-seeking class round about. I was soon fast asleep, but was abruptly awoke by a twenty-eighth individual depositing himself on the top of my mattress and myself. He was very damp, and much disappointed to find the bed already occupied; so I let him lie beneath the other side of the mattress, wrapped in the dirty counterpane, which I had left lying spread over the bed. I slept very well until there was an alarm of fire, caused by one of the twenty-seven occupants who came up rather late and full of whisky, upsetting himself and one of the lamps, with its inflammable but strong-smelling contents, over an occupied mattress, and setting fire to it. The occupant was furious at the prospect of being burned, and sprang up, and with the assistance of his two immediate neighbours, lifted up the offender, pushed him through the door, and let him roll

down the ladder by which access was obtained. The man howled on coming in contact with the wet slush in the stable yard, and a man with a lamp came out to see what was the matter. One or two others nearly stamped out the fire with the mattress, but it burned up again, and the mattress itself, as a precaution against fire, was then also thrown out of the door, and fell on the top of the man with the lamp, who was just at the foot of the ladder—he and his lamp were both extinguished. The man, in trying to get rid of the burning mattress, pushed, and kicked the drunken man, who woke up to find the burning mattress close to him. Those on the ladder head called to the man to turn the mattress over into the mud, which he did, and then pushed the drunken man into it, so as to squeeze it into the wet mud. The man apparently found it hot, and began to bawl, but got no sympathy or help, and was left there till morning: the mud and his weight extinguished the fire. Of course we had all jumped up at the first alarm, and were picking up our things ready to skedaddle if the fire extended. The various incidents we saw through a window which had been pushed open; it had only a wooden flap over it, as is usual in stable lofts. We most of us went to sleep again until it was light, and then got up. There were neither washing nor sanitary arrangements of any kind in the loft. A man from the house (the one who had been extinguished) said the lavatory was in the bar; an unusual arrangement but the custom there is to wash their insides with whisky while they wash their faces with water, on rising in the morning. I waited till most had departed, and then endeavoured to get a little of the mud off my Wellingtons by the aid of a piece of stick. My neighbour who had slept under the same mattress, suggested that if I went to a puddle and sluiced them with the water by means of some of the

straw which was jutting through holes in the mattress covers, I should do better. I followed his advice, and got off a good bit of the mud, and then went into the bar to the supposed lavatory. There was the landlord, or boss, vending whisky. I asked for some whisky, but did not drink it, and then went behind the screen which hid the supposed lavatory, in which I found two cracked basins and one piece of soap, but I did not see a towel till I turned round and found a very dirty article hanging on the screen. I could not find even a clean corner, so took it round and suggested to the boss that it was almost time for a clean one. He received the suggestion with some surprise, and said, "Wal-l, now, there's over thirty-two people 'as wiped themselves with that 'ere towel this 'ere morning, and you're the fust as has said anything agin it." This statement, I think, proved my case. However, I got a clean one, and made good use of it.

On quitting the lavatory, I enquired of the Landlord for someone to brush, a *little only*, of the mud off my boots and leggings; he smiled incredulously, and said that there was a fine upon anyone with polished boots. At the present time you would scarcely recognize me, and I am sure you would hardly wish to do so.

I got upset into the bottom of the boat when we ran into another boat in the dark, which was stuck fast, right in the middle of the channel, and I am mud almost from top to toe, in fact nothing but mud up to my knees. I have only my satchel with me; my baggage is at Meadville, where I hope to find it to-night, and to appear at church to-morrow in a respectable condition. I took the precaution of putting on some old clothes, and if they were not spoiled before they are now.

The chief places on the Creek between Shaffer's Farm and Oil City, are Trunkville, Petroleum Centre, Tar

Farm, and Rouseville, where Cherry Run, another small creek, joins Oil Creek.

The excitement is now greatest on Cherry Run, where several splendid flowing wells have been struck. The oil from flowing wells is worth about two dollars less per barrel than that from the pumping wells, on account of its lower specific gravity. Oil is now about eighteen dollars per barrel.

Oil is now found in Western Virginia, and also in Ohio, and it is the belief of a great many people interested in the subject, that the supply of oil depends upon the discovery of new districts, as the present one will be exhausted in a few years. However, as the bituminous coal-bed, below which the oil exists, is said to extend from the last spurs of the Alleghanies, in Virginia, to Georgian Bay, in Canada West, Sir W. Armstrong will perhaps be able to estimate how long the supply will last with continually increasing consumption.

I am now going out to see if I can obtain a view of a Refinery. In the afternoon a Pond Freshet is expected to come down the river. I have obtained a few views of places in this region: as *photographs* they are poor and dear, but as *views* they will be very interesting in England.

I succeeded in obtaining a short view of a Refinery. The oil is distilled in large vats, then treated with sulphuric acid, and afterwards with alkali, and to counteract the acid it is afterwards washed and run into barrels painted either blue all over or at both ends; the former is No. 1 oil, and the latter No. 2. The consumption in the oil region itself for light must be very considerable; gas is manufactured from it at Meadville, and other places not too distant from the source of supply. Some wells have been sunk at the town of Erie, and in the lake of the same name, and yield lubricating oil worth a dollar per

gallon; one yields three barrels per day, giving a revenue of 120 dollars the barrel, containing forty gallons each.

From Oil City I went in a steamer down the Alleghany to Franklin, the county town of the neighbourhood; rather a nice place if the mud were less abundant. The railway here runs to Preadville, and will be open as far as Oil City in the spring, and right through to Titusville by the middle of the summer. The distance from Franklin to Meadville is twenty-eight miles, the same as that from Corry to Titusville; and from Oil City to Titusville about twenty miles, making nearly eighty-five for the whole of the loop line. At both Franklin and Shaffer's Farm there are piles of steam-engines and mining gear waiting to be conveyed to various places on the creeks in order to commence operations.

There are wells on both banks of the Alleghany all the way down to Franklin, about seven miles. At Franklin, another creek, about double the size of Oil Creek, runs into the Alleghany. Wells sunk on its banks have been tolerably successful, but Cherry Run has been the best neighbourhood; nearly every well has "*struck it*" to a greater or less extent.

W. T. N.

MEADVILLE, VIRGINIA,
Sunday, December 4th, 1864.

I reached here yesterday evening about 7.30 P.M., and although very hungry, went to my room and spent nearly an hour in cleaning myself and changing my clothes. Meadville is on the main line of the Atlantic and Great Western Railway, and is the "Swindon" of America. The company have built a fine hotel, forming part of a fine station. Fine stations are very rare in America: I don't think there are more than half-a-dozen in the whole of the States. The dining-hall adjoining the platform is divided in two, one-third for the hotel, and two-thirds for the train-dining. All the trains are timed so as to have either dinner or supper here; and although the establishment has only been open about three months, it has already acquired a great name, and must be very profitable to the Atlantic and Great Western Railway, to which it belongs. If I had not taken the precaution of telegraphing early in the day I should not have obtained a room; they were so full that they had to put up beds in the parlours. The dining-hall is in the Gothic style, and when fully completed will be very fine. The fare is good, and the price moderate. It would be a very good thing if some of the other companies would set up like establishments. One is generally charged seventy-five cents for the commonest and worst of fare, and there is no help for it, for when one travels thirty-six hours or so at a stretch, three or four meals must be had. On the Pittsburg, Fort Wayne, and Chicago line, they run a saloon car on "through" trains, in which eatables and drinkables are served. But this course is open to objection, for the common class of men, who travel in America in great

numbers, get intoxicated, and not only endanger their own lives in getting from car to car, but also those of their fellow-passengers; for when a disturbance arises, each draws his revolver and fires free, without much regard as to whom he hits. The universal carrying of arms which prevails here is proof of a decided lapse towards barbarism. In the Oil region it is very bad indeed; five people have been murdered this week on the Creek. Owners of wells and others have to carry money in order to pay the men employed upon them, but the gradual establishment of banks will somewhat ameliorate affairs in this respect.

Meadville is a nice, quiet little town, but is likely to increase very rapidly; indeed, it is already doing so. It is the turning-point of the traffic towards the Oil region, which draws its supplies of provisions from here and Franklin. Meadville, and Corry, the junction of the Atlantic and Great Western, Philadelphia, Erie, and Oil Creek Railways, have a promising future to look forward to. Corry is as yet only a little village, so that Meadville has the advantage in the commencement.

I intend leaving to-morrow morning at 11 A.M., for Pittsburg, arriving there about 7.30 P.M. I don't know whether I shall go on the same evening to Harrisburg, but I think not, because the railway between Pittsburg and Harrisburg crosses the Alleghany Mountains, and I wish to see them by daylight. This railway is considered one of the greatest works ever executed, equalling the passage over the Western Ghauts in India. The Philadelphia and Erie Railway, along which I came from Harrisburg to Corry, goes along the banks of the Susquehanna, the largest river on the east side of the Alleghanies. The river has two branches where it is crossed near Harrisburg, and the bridges are each more than a mile long.

Harrisburg is the capital of Pennsylvania. I should

like to be there for a few hours. The Susquehanna is crossed near its debouchure into Delaware Bay, by the Philadelphia, Wilmington and Baltimore line, at present on a huge steamer with no less than five lines of rails on it, and which takes over the whole train at once; but they are now constructing a stupendous bridge, second only to the one at Montreal.

When I went with Mr. Homans to the Palisades, some mountains about fifteen miles above New York, on the west bank of the Hudson, we made a very interesting experiment as to the velocity of sound. The Hudson River Railway runs on the other side of the river, *there* about a mile and a quarter wide, and crosses the mouth of the Harleom River on a wooden viaduct with stone abutments. We observed closely when the train entered upon the wooden portion of the viaduct, and then counted the number of seconds until the change of sound took place, and found it to be about six seconds, giving a velocity of about 1200 feet per second. The Hudson River Railway follows so closely the course of the river, that the track is often flooded, and is very liable to be washed away. It often has water on both sides, and is of a decidedly amphibious character, and is so dangerous that a man is stationed every quarter of a mile to give notice of danger, so that although they run faster than any other line in the country, they very seldom have an accident. The day I came along an unusually high tide and strong south-west wind undermined a portion of the road, nearly opposite to West Point, the Military Academy, and we were delayed an hour or more till it was propped up. A similar occurrence took place going into Cincinnati on the Xomia River, where the bridge was nearly carried away, and a long string of cars had to be pushed over empty, backwards, after the passengers had crossed on foot; it was not considered safe to take an engine over.

Indeed, the rivers in this country are the chief causes of trouble and cost to railways; they are generally so large, and although the volume of water may not be great nine months in the year, yet they are subject to sudden risings called "freshets," which cause a great deal of destruction on the banks, carrying trees and all sorts of things along with them, and when these become lodged against the piers of a bridge, the extra pressure of the water against the accumulated mass is often sufficient to so injure the pier as to render the bridge unsafe, so that the piers have to be built much stronger than is usually necessary, and this even with regard to quite small streams.

W. T. N.

MEADVILLE, VIRGINIA,
4th December, 1864.

MY DEAR MOTHER,

I have arrived here safely after my trip through the Oil regions, of which I have given a long description in my letter to my father. I am resting myself over Sunday at a nice hotel, after my somewhat arduous journey. I propose leaving to-morrow and expect to be in Washington some time on Wednesday. How long I shall stay there depends very much upon circumstances, but I rather wish to get back to Montreal. I do not think you would have known me as I appeared in Oil City, in my pea-jacket and leggings, covered all over with mud, and here and there oil; but this morning I was at church in my usual costume, cleaned, brushed, and respectable. One of the black waiters here seems to have taken quite a fancy to me, I suppose because I went to supper last evening clean, and most of the others went in the condition in which they arrived. He seemed quite disappointed to-day when I could not eat any more dinner; he fed me so well at breakfast that I had not very much appetite; he had prepared a supply of everything in the dinner-lift beforehand, and kept coming with relays of things till a good-sized table was so crowded with dishes, that he could not get any more on, even with the exercise of considerable ingenuity. I always get on very well with the "darkies," I suppose it is by speaking civilly and kindly to them—a thing which the Yankees do not generally practise. The last morning I was in Philadelphia, I went to a Quakers' Meeting, sat for an hour on a brown cushion, till an old man got up and said a few words, and then another old man who sat first on the Elders' bench, prayed for about fifteen minutes, after which everyone dispersed. There were very few shovel

W. T. N.

bonnets and broad-brimmed hats, a good many reduced plain brown bonnets, but a still larger number of those of the ordinary shape; indeed, the old generation of Quakers seems to be almost extinct, even in the Quaker City. Philadelphia is a nice quiet place but I do not like it quite so well as Boston, it is too rectangular; but for a large town, a greater number of the streets are of a more uniform character and respectability than in any other town I have seen, either here or in Europe. The characteristic house of Philadelphia is a "three storey brick," and the spinsters are educated to aim at a husband and such a future dwelling.

The Continental Hotel at Philadelphia is the largest, and I think generally the handsomest and best arranged I have seen here, not excepting several at New York, Chicago, and St. Louis. It has a lift, to take passengers up and down stairs, which is rather peculiar. The platform room, or rather cage, has a round cylinder in its middle from floor to roof, on which there is a continuous seat like that round a tree in Hyde Park; inside this cylinder, which is provided with a receiving or female screw-worm, there revolves the stem of a gigantic pine tree, levelled quite straight and parallel: this stem is fitted with a brass projecting or male screw-worm, which works in the other worm. The cage is lifted,—I should say operated,—by the pine tree or centre male worm being turned by a small steam engine,—the power required is not great. The advantage claimed is, that the cage cannot run away and fall down, as do some of the ordinary cages, suspended by chains or ropes, because the two worms work into each other, and the cage cannot slip down. There is, however, a disadvantage: if the engine breaks down while the cage is on its road between two stories, the cage must remain there until a jury rig is fixed to revolve the pine stem again. This has occurred, and the occupants had one hour's confinement.

The streets in the largest town of the Keystone State, which is the title bestowed on Pennsylvania, are called after fruits, such as Pine Street, Chesnut Street, Vine Street, &c.

The streets are very ingeniously distanced, 100 houses being allowed along the main street between each side street, so that if you are opposite No. 638, you must just have passed 6th Street. The streets are very regularly laid out, the north and south streets being numbered regularly, from the Delaware to the Schuylkill,—Market Street being the central avenue. The numbered streets are also allowed 100 houses for each block they are distant from Market Street, so that 614 North 6th Street is 1214 houses from the top end of Market Street; and if you know how long it takes to walk past 100 houses, you can calculate within a minute or so how long it will take. One of the inhabitants with whom I was conversing about the system called it the "quadratical system." I suggested "rectangular" instead, but he did not agree.

It does not at all follow that the largest town is the State capital. For instance, the capital of New York, the "Empire State," is not New York, but Albany, a small town 150 miles north of New York, up the Hudson River. Of Pennsylvania the state capital is Harrisburg, a town about 160 miles inland from Philadelphia, a quiet, slow place for America.

Philadelphia rivals Boston in its ancient edifices and monuments. The Treaty Monument marks the site of the old elm tree blown down about 60 years ago, under which John Penn made his treaty with the Red Indians. Query?—how many miles West must one now go before meeting a Red Indian? The Mississippi is about 750 miles; perhaps another 250 miles on to that would do it. In Chesnut Street is *Carpenters' Hall*, where assembled the first Congress of the United Colonies, not States, as

afterwards named. In this street is also the *Independence Hall*. In the East Room the Continental Congress met on 4th July, 1776, and the Declaration of Independence was adopted and publicly proclaimed from the steps in front of the Hall. The East Room presents still the same appearance as on that memorable occasion. The furniture is that used by the Congress; there is a statue of Washington, numerous portraits and pictures, and many curious relics of the Revolutionary War. Here also is preserved the "Liberty Bell," the first bell rung after the proclamation of the Declaration.

In a room called "Congress Hall," on the second story, President Washington made his last farewell speech.

Franklin's grave is at the S.E. corner of Market Street and 7th Street.

Philadelphia also boasts the only really correct Corinthian building I have seen, or about which I can hear of in America at present. I refer to "Girard College," an Institution founded for the "gratuitous support and instruction of destitute orphans." The building stands at the top of a rising ground, almost a hill, and a fine view is obtained from the roof, which is reached through a trap door. I was invited, when visiting the Institution, to go up and see the view, as the Prince of Wales had also done so when here; I went up. Near the top the guide made way, and I went first; and as my head appeared through the trap, off went my hat; there was a great laugh on the part of those just below, who it seems had played me a trick of getting me to go first, expecting my hat to go. However, it did not travel far, and was picked out of the gutter. The Prince of Wales' blew right away; but this it seems was a tall hat (what they call here a stove-pipe), and mine was only a deer-stalker. It seems that at the elevation occupied by the Institution

and its grounds (about 50 acres), a strong wind usually blows.

Philadelphia is very pleasantly situated between the Delaware and Schuylkill Rivers, and is stated to be very healthy. It has a splendid Park of nearly 3,000 acres, which extends along both banks of the Schuylkill River for some miles. The only other park I know of with a river through it is the Prater at Vienna, but this is much finer and not so flat. On the summit of Fairmount Hill there are four large reservoirs for the waterworks, covering about six or seven acres, and stated to contain nearly thirty million gallons. A dam 1600 feet long is placed across the Schuylkill, and water wheels worked by the water raise the water to the topmost reservoir. The whole concern ought to be shipped to London by the first steamer big enough to contain it, and then London would have good water quite cheap. I don't see why the Thames could not do its own pumping the same way at Teddington, near which my rowing trips have taught me there is a lot of vacant land which would give space for the reservoirs.

Please give my kindest regards to all my friends. I will endeavour to send each a Christmas letter, but you do not know how difficult it is to write long letters when one is travelling about here; one's luggage is locked, and not at hand, there is no table in the room, the gas gives very little light, and in the public room the people seem to be injured if you do not wish them to read what you are writing; one is tired and dusty, and sleepy and feverish with travelling for hours in hot, close cars, with abominable pipe-stoves, dirty and unaccommodating people, the men spitting, the women walking to and fro, up and down the cars every five minutes to get some water, the babies crying and screaming, the little boys rummaging about and seizing hold of every thing that takes their fancy.

The American children are the worst behaved I ever saw, and their parents are not much better ; the little boys are the greatest nuisance, they make remarks upon everybody and everything, handle things, and are admired by their parents for their " inquiring minds !" Indeed, after they are sixteen or seventeen they, and especially the girls, rule everything ; the young ladies in New York invite whom they like, particularly young men, without the remotest reference to their elders, say what they like, do what they like, spend what they like, and in fact, rule the roast altogether. But enough of American Society. I suppose you will be making preparations for Christmas by the time you receive this letter. Christmas is observed in Canada, but not in the States ; New Year and Thanksgiving days (24th Nov.) are the great feasts. The families unite on the latter day in the manner usual in England at Christmas.

W. T. N.

WASHINGTON,

8th December, 1864.

MY DEAR MOTHER,

I put this slip into the letter to you to say that my last packet missed the Cunard steamer, because I could not obtain any stamps of a higher denomination than three cents, and I should have had to cover the letter completely with them.

I left Meadville on Monday morning and went to Pittsburg, and then came across the Alleghany mountains to Harrisburg. The railway is a great engineering feat. It twists and bends round the edge of precipices, goes through hills and over torrents in the most daring manner. The scenery is grand in the extreme.

I stayed two or three hours at Harrisburg, the capital of the "Keystone State." It is rather a miserable place. I then continued my journey to Baltimore, where I slept, and started early next morning for Washington.

I was so fortunate as to obtain a room at Willard's Hotel, the chief hotel in the city, and the greatest Babel I ever saw. It is worse than the St. Nicolas at New York, for there are as many people and no adequate space to accommodate them. The dining-room is so long, that if you have your dinner at one end, by the time you have walked to the door at the other end it is digested, and you are ready for your tea, which you find going on there.

The Capitol is certainly magnificent on the outside, and some portions of the interior are fine, but the frescoes, with the exception of about four, are beneath criticism. The Senate House has some good parts, but is not the least impressive, and the House of Assembly is still less so. The respect of the visitor is not increased by what

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appears to be the favourite posture of many of the members. They throw themselves back on their chairs, balance the chair on the two hind legs, put their feet on the desk in front of them and so present the soles of their boots instead of their faces to the speaker.

The seats are arranged in a semi-circle, every two members having a desk and arm chairs. The extent of accommodation provided for the public is very large. The public may also be taken by members into the body of the House—a most inconvenient arrangement. To the gallery no tickets are required, and it is consequently half filled with nasty dirty idlers, soldiers, and all sorts of common people, who seem to go for the sake of a seat and to pass away the time. Altogether, the absence of order and dignity in the regulations of the Chambers of Legislature detracts very much from the impressiveness of the proceedings.

I am, Yours, &c.

W. T. N.

WILLETT'S HOTEL, WASHINGTON,
DISTRICT OF COLUMBIA,
9th December, 1864.

MY DEAR FATHER,

I put a few words into my last letter to my mother, about Washington, and will now continue.

The Americans are considered an ingenious people, but in the case of Washington they have "licked creation," and have built a city, or rather odd pieces of a grand plan, which makes it most difficult to find one's way; many of the streets are not carried out according to the plan, consequently instead of leading into the next street they terminate in a quagmire of their own.

The avenues are so broad (160 feet) that it is quite a journey from one side to the other, and as the streets are not paved, this journey is by no means agreeable, for the soil of Virginia seems to be such a peculiar compound, half clay, half loam, that it is perfectly appropriate for forming a very tenacious mud, which remains liquid a long time and continually deepens. The avenues are named after the various States of the Union, Pennsylvania Avenue running from the Capitol to the White House, a distance of more than one mile.

The streets, which cross the avenues at right angles, are numbered. The city was planned and laid out by Washington some years before the seat of government was removed thither from Philadelphia, which took place in 1800. The Capitol, the chief building, is no doubt the most complete building of its kind in the World; it presents a very imposing appearance, and its main front is very handsome, but the Dome is too stilted, it has a double tambour as if the designer had done it in

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W. T. N.

order to beat Sir Christopher Wren's St. Paul's, but he has overdone it; the interior is also generally satisfactory; the Senate House is a fine chamber, semi-circular in shape, with the President's chair in the centre of the diameter. The galleries for the public are very spacious, capable, I believe, of accommodating 1,200 persons, but they are too spacious; I think they detract from the appearance of the room, and the general effect is by no means striking. The House of Assembly is very similar to the Senate House, and the same remarks apply to it more forcibly; the members sit in pairs at desks, the only effect of which is, that the members conduct their correspondence during the sittings of the House. The Rotunda under the dome is the most successful part of the interior; it has eight large frescoes on the walls, some of them of rather questionable merit. The height from the floor to the base of the lantern is 200 feet; the dome is rather higher in proportion to its diameter than is usual, and is scarcely so graceful in form as might be. The Library is a fine room, well adapted to its purpose; some of the corridors are also very chaste and elegant, but the frescoes are generally failures. The fittings of the Houses are by no means imposing; the members chat with outsiders upon the floor of the House, and conduct themselves in other unimposing ways. The same may be said of the Courts of Law; the absence of robes, and also of respect for the Judges is very observable. The White House, the official residence of the President, is a tolerably comfortable abode; a certain number of the rooms are left open, and in these a dirty-booted, tobacco-chewing public has altogether spoiled everything on the ground, and two or three feet above it. The East room, in which entertainments are given, is tawdry, and at present shabby-genteel, but I suppose new furniture will not be put in till the Inauguration. The War and Navy

departments are located in buildings to which the Admiralty and War Office in London are gems. The Treasury is a large, handsome building, in what they call the Corinthian style, but which could be better named United States New Greco-Roman. The State Department is better than the Army and Navy, but not much. The Internal Department, Census, Patent Office, and a few other bureaus, are all located in a very large and grand building called the Patent Office, situated about three-quarters of a mile from both the Residence and the Capitol. The third floor is devoted to a Museum, where models of all the machines for which patents have ever been granted in the United States are classified and deposited. The interior of this building is superior, but the exterior is inferior to Somerset House. The General Post Office is opposite the Patent Office, and is a smaller edifice in the same style.

The next most important building in Washington is that of the Smithsonian Institution, it is a large red-brick edifice in the Romanesque, consisting of a museum, picture gallery, two lecture theatres, apparatus room, library, rooms for experiments, chemical laboratory, and Mr. Henry's residence. They have a fair collection of various things, a very good scientific library, &c. It was founded by a bequest made by one of the Smithsons of the same family as are now Dukes of Northumberland, who had come over here and made a large fortune. The terms of the bequest were "to increase and diffuse knowledge among men."

Dr. Henry, the secretary, is a most cultivated and able man. He has organised the Institution on a universal basis; it is partly a museum and partly devoted to scientific training, and although several Members of Congress and people of note, argued that as the money was bequeathed to the United States it was intended for

the United States alone. Dr. Henry overcame the opposition, and adhered strictly to the founder's intentions, as expressed in the bequest.

Dr. Henry kindly took me all over. We talked about various physical sciences and the various professors at King's College, most of whom he knew by name, and corresponded with and greatly admired Professor Ramsay, the Royal Society gold medallist, under whom I had studied *Experimental Physics*. Dr. Henry did not admire the English appellation. He considered that "Illustrated Physical Science," would be much better. I quite concur in his views, as the title of the class was often a joke at King's, and the students in it were asked by the outsiders, "what sort of physics they took and how they agreed with them?"

Good houses in Washington, except just in the neighbourhood of the Residence, are few and far between, the intervals are filled up by miserable buildings of brick, or sometimes by shanties, the distances are very great, and the grand idea that by putting the Residence a mile-and-a-half from the Capitol the interval would be filled by magnificent mansions, is a complete failure, for the Residence is placed in the lowest and most unhealthy place for miles round, and as the houses have congregated round it, the mortality is rather higher than in some other cities. Very few of the Members bring their wives and families to Washington, consequently society is composed entirely of the Heads of Government Departments, who have perhaps more "go" in them than any other bureau-cracy, but would still be improved by the admixture of some outsiders. The want of a mixed middle class is nowhere more felt than in the Capital; at present the Government Employés, from the Secretary of State downwards, are bitterly complaining that their salaries have not advanced with the price of commodities,

and what with that and the increased and burdening taxation, they are really in a very *pitiabile* condition. The extravagance in dress so prevalent in New York is totally absent in Washington. Everything, from streets to bonnet-ribbons, seems to be spun out to its greatest length. The only things to be seen in abundance are soldiers; the streets are filled with mounted soldiers and officers instead of carriages, and with army waggons instead of omnibuses; on the pavements wounded men take the place of ladies, of children and dogs; no fine shops are to be seen in the whole city. Quartermasters' depôts seems to have been substituted for linendrapers, and commissary stores for grocers; the vacant spaces are filled with huts and shanties for army purposes; altogether the place is like a great camp, with a few large stone buildings let fall into its midst by accident. Of all the capitals on the face of the earth, I really believe that Washington is the least attractive. Mr. Kennedy, the Census Superintendent, took me to visit various officials, friends of his, of whom I will first say something about the President. Mr. Kennedy exhibited to the President a manuscript map of two or three of the States of the Union; which States I don't know, but I fancy they are Southern and not Northern States. On this map there seems to be set out the situation, population, and productions of each township; but as the map has been probably put together at the Census Department by special order, I have not seen it. After the President and Mr. Kennedy had had a good look into the plan, we took our leave,—the President desiring Mr. Kennedy to shew the plan to Mr. Stanton without delay. His personal appearance is well known, and is aptly described by one of his countrymen, who said of Abraham Lincoln that "he was a man, a mile and a half high, with a number 6 hat, and number 14 boots." Nevertheless he is an agree-

able person, chatty and joking; he let off three witticisms while I was there which cannot well be transferred to paper. I think if his mind were not so buoyant he must have sunk before now, beneath his load of care and responsibility.

After calling on Mr. Wells, the Secretary of the Navy, who is a very quiet, affable old gentleman, and is said to possess competent knowledge of maritime matters, we went to see the Secretary for War, Mr. Stanton, who, after the President, is the leading mind in the government.

Mr. Stanton is a middle-aged man of moderate height, who wears a beard, his manner is rather abrupt, but decided, his eyes bright and piercing, and the shape of his head gives one the impression of exceptional capacity and vigour.

We had to wait for a time, during which Mr. Kennedy introduced me to Col. Hardy, Inspector General of the United States Army, and Mr. Stanton's right-hand man.

Col. Hardy and Mr. Kennedy are well acquainted (the latter has two sons now serving in the army,) and Mr. K. during the conversation enunciated the, to me, quite new idea that Col. Hardy should give me a pass to the Army of the Potomac, and that I should go down with the headquarters of the 6th corps who were about to embark at Washington, to join General Grant's Army of the Potomac at City Point on James River, and occupy lines on the left of the army besieging Richmond. I did not hesitate to join in the project, but Col. Hardy objected that as I was not a professional soldier, it would be irregular.

At this point Stanton's door opened, and we walked in. Mr. Kennedy introduced me to the Secretary of War, who made various sharply uttered enquiries as to my age, —what part of England I was born in,—how and where educated; and on my informing him at King's College, London, he replied that he thought all the Colleges were

at Oxford and Cambridge. I explained that there were Universities at Durham, London, and Dublin, and also several in Scotland, at Edinburgh, Glasgow, Aberdeen, St. Andrews, &c.

Mr. Kennedy then suggested the Pass, whereat Stanton said nothing; so Kennedy produced the plan, and they retired to a corner window some way off (as the room was large), and Stanton cross examined the plan and its author in the same quick and curt way that he had questioned me. When he had finished, he turned round and said, "Well, youngster, and why should you wish to visit the Army of the Potomac." I replied, that I had travelled about Europe, and had seen the various trained armies of France, Belgium, Prussia, and Austria, and should like to see the American National Army, which had all been raised within the three or four years since the beginning of the War of Secession.

Mr. Stanton said no more, but told me in a quiet, curt voice, that he thought he would "chalk my back," gave me a severe squeeze of the hand, and reverted to the map again.

I stood some way off, and mused as to what process was to be applied to my back, until the map being done with, and Mr. Kennedy's hand severely squeezed, I made a very ceremonious bow, and we left the room. Mr. Kennedy then said to Col. Hardy, whose post was in the next room, "Ah, you see Mr. Stanton has given my young friend a pass." It immediately struck me that "chalking my back" meant giving the pass, so I rushed back at the door, which was just closing on some others who had gone into the Secretary's room, squeezed in, and said with excitement, "I have to thank your Excellency for your kind consideration in granting me a pass. I did not quite understand the expression used by your Excellency." Stanton replied, jokingly addressing all present, "Told

"youngster I'd chalk his back,—didn't understand me." I was again making a most polite bow before retiring to the door, when my departure was hastened by—"That'll do, youngster; be off, and good luck to you." The pass was duly written and signed, and we returned towards the Census Office, where Mr. Kennedy and I parted, as we were to meet again at his house, at his family dinner, later on to-day, and concert the remaining details as to my passage with General Wright and his staff of the 6th corps.

Mr. Kennedy tells me that the pass will do everything, and that it, together with the letter of Mr. Strong, the Chairman of the Sanitary Commission, will find me all I want.

This was good news, as I began to reflect that some considerable expenses might accrue from the expedition, and I thought of writing to the agent in New York, who had my money, and ask him to send me some; however, I did not quite know where to have it addressed, so I put off writing.

I am to see some of the other officials on my return to Washington.

I am, yours, &c.

W. T. N.

ON BOARD SANITARY COMMISSION BARGE,
CITY POINT, VIRGINIA.

12th December, 1864.

Having finished my description of the capital of the United States in my last letter, I will go on with that of the camp of the Army of the Potomac. Col. Hardy handed me my pass, and I left Washington on board a steamer, which conveyed General Wright, the Commander of the 6th corps, and his staff, from Washington to City Point. I had an introduction to the General, and also to his chief of artillery, Col. Tomkins, both from Mr. Kennedy, to whom they were very well known; the latter especially was a very intimate friend. We left the wharf about 4 P.M. on Saturday afternoon (10th inst.), and proceeded down the Potomac, which is a fine large river. The distance from Washington to the mouth is about 100 miles; from the mouth to Fortress Monroe 80 miles along Chesapeake Bay; and from there to City Point 100 miles, making altogether 280.

The "Keyport," was a pretty good steamer, but it had a large cargo, consisting of the General, twelve staff officers, about forty orderlies and servants, sixty horses, and some baggage. There were no sleeping berths, so the officers had their bedding spread on the cabin floor. The weather was very cold, the food poor, the cabin floor hard, and the United States blankets rather thin. An officer's bedding consists of a waterproof covering to lay on the ground, and a number of blankets, varying from four to six. The General and the Colonel each lent me a pair of blankets, but even with those, my own great coat, and an immense cavalry overcoat, it was very difficult to

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keep warm. We lay in two rows on the cabin floor, with our feet towards the stove. Among the staff officers, were Captain McClellan (a brother of the General's), Captain Lerrar, a young man who had travelled in Europe, and Major Whittier, the chief aide-de-camp, a young West Point officer—these were by far the best of the lot; some of the others were very uncultivated and rough. On Saturday night or rather one o'clock on Sunday morning, there was a great hullabaloo among the horses which were standing close together under a covered deck. One of Captain Lerrar's had kicked through the partition and jumped down into the engine-room; however, as there were no means of getting him out he was well supplied with water and had to stay there and bear the heat.

Sunday was a very long day; I spent it chiefly in reading, except during the evening, when I had a long conversation with Dr. Holman, the Medical Director of the Corps, a tolerably agreeable, but somewhat narrow-minded Bostonian; he was rather astonished at my knowledge of wounds, obtained in the summer in the hospitals in Montreal, in connexion with the emigrant affair.

We reached City Point late at night, and anchored in the middle of the stream, where in the morning we were hard and fast aground, and did not get off till twelve o'clock. I immediately went to the Provost Marshal and had my pass properly registered, and then went to have a look round City Point.

City Point is at the confluence of the James and Appomattox rivers, about 100 miles from the mouth of the former, and 30 below Richmond. The James is a very large river, but somewhat shallow; slightly picturesque, but not very much so. Previous to the war, City Point was only a small place, but now it is the grand dépôt and base of the Army of the Potomac, and the Army of the James

Rivers. It has a railway sixteen miles long going to the front, and numerous lines of steamers to Washington, Baltimore, Philadelphia, &c.; and innumerable small steam vessels to local military points. General Grant has his head-quarters here, which, together with the Quartermaster-General, Commissary General, Provost Marshal, Medical Inspector, &c., &c., &c., constitute a very large establishment. Some very fine long wharves have been built, with the rails laid down to the water's edge, warehouses (of wood) constructed, and everything finished with the exception of the roads.

Mr. Strong, the Treasurer of the Sanitary Commission in New York, gave me an introduction to their agent here, who has kindly provided me with quarters. His office and store for the distribution of comforts and necessities to the troops are on two barges, moored to the wharf, on board of one of which I am now. The accommodations are of course rough and ready, but better than could have been expected. Trains loaded with forage, food and stores, are continually going to the front on the left.

I must conclude in haste, with best love all round as usual, as a man says my horse is waiting.

W. T. N.

ON BOARD SANITARY COMMISSION BARGE,
CITY POINT,

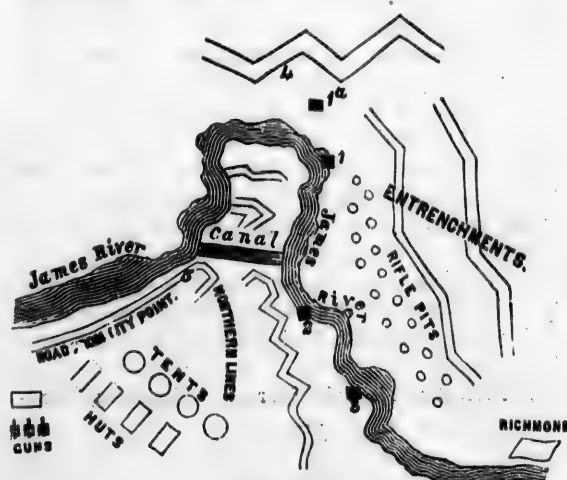
16th December, 1864.

I have returned from an expedition to the front, and must now describe briefly the position of the army of the Potomac. The Left, under the command of General Meade, extends from the Appotomax south-westward round Petersburg, as far as the Weldon Railroad, and a little beyond. The Right, or the army of the James, extends from Point of Rocks on the Appotomax, to Dutch Gap and Fort Harrison on the James, and then bends round to join the line of the James again, somewhat above City Point.

The Southerners command the James from Fort Harrison to Richmond, and also partially at Dutch Gap.

On Monday afternoon I went up the James about twenty miles, to a place called Deep Bottom, where the Sanitary Commission have a station; slept there in a tent occupied by the engineer officers in charge of the canal work. The question was argued as to whether this particular tent was within the shell range. The majority considered that it was. The shells burst regularly every 8 to 10 minutes, about 200 yards off, and exploded; but the noise they made was nothing to the screeching and shrieking of some 120 mules belonging to the Army Service Department, which had a waggon station near by. The engineer officer thought that the shells thrown by the Southerners from Fort Howlett towards the Dutch Gap canal, were by no means a nuisance but

rather useful, because, as he alleged, they kept the darkies who were employed in the night digging, from going to sleep. The next morning I rode out first to the lines of the 18th Corps, near Jones' Landing, and then to the famed Dutch Gap. It is a narrow peninsula, through which a canal is being cut, to enable the gunboats to go further up towards Richmond. The James winds very much, and here goes seven miles round a peninsula only 350 yards across. (*Vide Map.*)



1. Fort Howlett.
- 1A. Southern Battery.
2. Fort Brady, Federal.
3. Fort Harrison, Federal.
4. Southern Earthworks.
5. Ravine with Casemates.

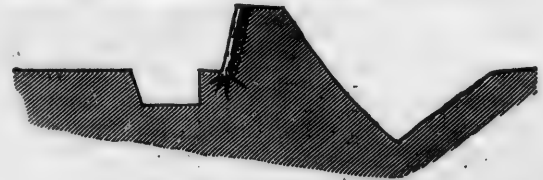
The canal is completed about three quarters across the neck of the peninsula, filled with water, and the re-

maining quarter is mined, and nearly ready to blow up. The river, between the two ends of the canal, is full of obstructions, placed there by the Federals to prevent the Southern gunboats coming down from Richmond in the beginning of the war, and now they are unable to remove these from under the fire of the guns of Fort Howlett. They have since taken Forts Brady and Harrison, and the command of the river above the canal.

Forts Howlett and Harrison are situated on lofty promontories, and are both very strong. Fort Howlett continually sends shells to annoy the men working in the canal; earthworks have been constructed above the canal to keep them out as much as possible, but they come far beyond the works.

The men who are posted in the neighbourhood have constructed curious casemates in a ravine marked 5 on my sketch. They are very similar to cases, with the entrance blocked up as much as possible. The whole lines occupied by the troops, both on the right and left, towards Richmond, are covered by a breastwork five feet high, with redoubts at the salient angles where the ground is favourable.

The breastwork is made of earth and felled trees, thus—



In front of the parapet, towards the enemy, there is dug a V shaped ditch, which supplies about one-half of the earth required for the parapet, and on the further side of this ditch the tops of trees with the branches cut sharp

are massed together with the twigs towards the enemy, so as to form an abattis which shall impede an attacking column and keep them under the full fire of the defenders at close range. The step is left behind the breastwork, to be mounted in order to fire; when standing in the ditch the head is completely protected. As the whole country for miles was covered with small timber, these works are very easy of construction; but the timber is fast disappearing, and when this winter is over there will not be much left. The corps guarding the works near Dutch Gap, and indeed all round the right, are blacks, except the artillery. They make almost smarter soldiers than the whites, and with good officers form very good troops, although of course they partake much more of the nature of machines.

The following day I rode round the lines nearly as far as Fort Harrison, and then returned to Deep Bottom, and after another night spent under canvas, in the proximity of the bass diaphason of the shells and the shrill falsetto of the mules, I started back here, and arrived this morning.

On my way back I stopped at a Sanitary Commission Station at the Coloured Hospital, a mile above here. The Sanitary Commission have a station in the camp of each corps, and one in that of each corps' hospital, for the distribution of comforts and necessities. At the one I saw there is a small library for the loan of books to convalescents, a tent with writing apparatus, where men can write to their friends, a smoking tent, &c. All this is free to the troops, who, as a general rule, appreciate it very much. At the stations in the camps near the front the men come for needles, thread, mittens, socks, drawers, warm shirts, tobacco, crackers, *i.e.*, a name for biscuits, and all sorts of things that the Government does not supply, but which are still calculated to

alleviate the discomforts of hard field service. At the Hospital Stations they distribute stimulants, delicacies, extra food, &c., &c., &c. I think it is a very great and deserving Institution.

I rode out to-day to Point of Rocks, partly to see the station there, and partly to see the Poccahontas oak, which is situated on a high point above the Appotomax river. It is the tree to which, in the early days of settlers, John Smith was tied to be burnt, when his life was saved by Poccahontas, the daughter of an Indian chief; one of the frescoes in the Rotunda in the Capitol represents her subsequent baptism. The view from Point of Rocks is very beautiful, with the river stretching away up towards Petersburg.

To-morrow morning I purpose starting back to Washington in the mail-boat, which leaves at 10 A.M., and takes about twenty-four hours to reach Washington. I should have visited my acquaintances of the 6th Corps, whose lines are on the left, but there is nothing more to see in one line than in another, and I am likely to be a little pinched for time so as to get back to Montreal some days before Christmas.

I think that as both Professor Henry and Mr. Kennedy know you by reputation, it would be polite in you to write to them and thank them for their civility to me. (Professor Henry gave me a letter to General Butler, who has gone South, so I could not see him.)

In Professor Henry's letter you might say that a letter to him was more useful than one to the English Ambassador. I am certainly much indebted to Dr. Jarvis for the letters he gave me to Washington. I think you will receive a pamphlet from Mr. Kennedy, and in acknowledgement of its receipt, you might mention his politeness to me.

I don't think I can write any more, as my hand is

awfully tired and numb, partly with holding my reins to-day, and partly with writing.

I had rather a long ride to-day, about ten miles ; it is not the distance but the state of the roads which distresses man and horse.

W. T. N.

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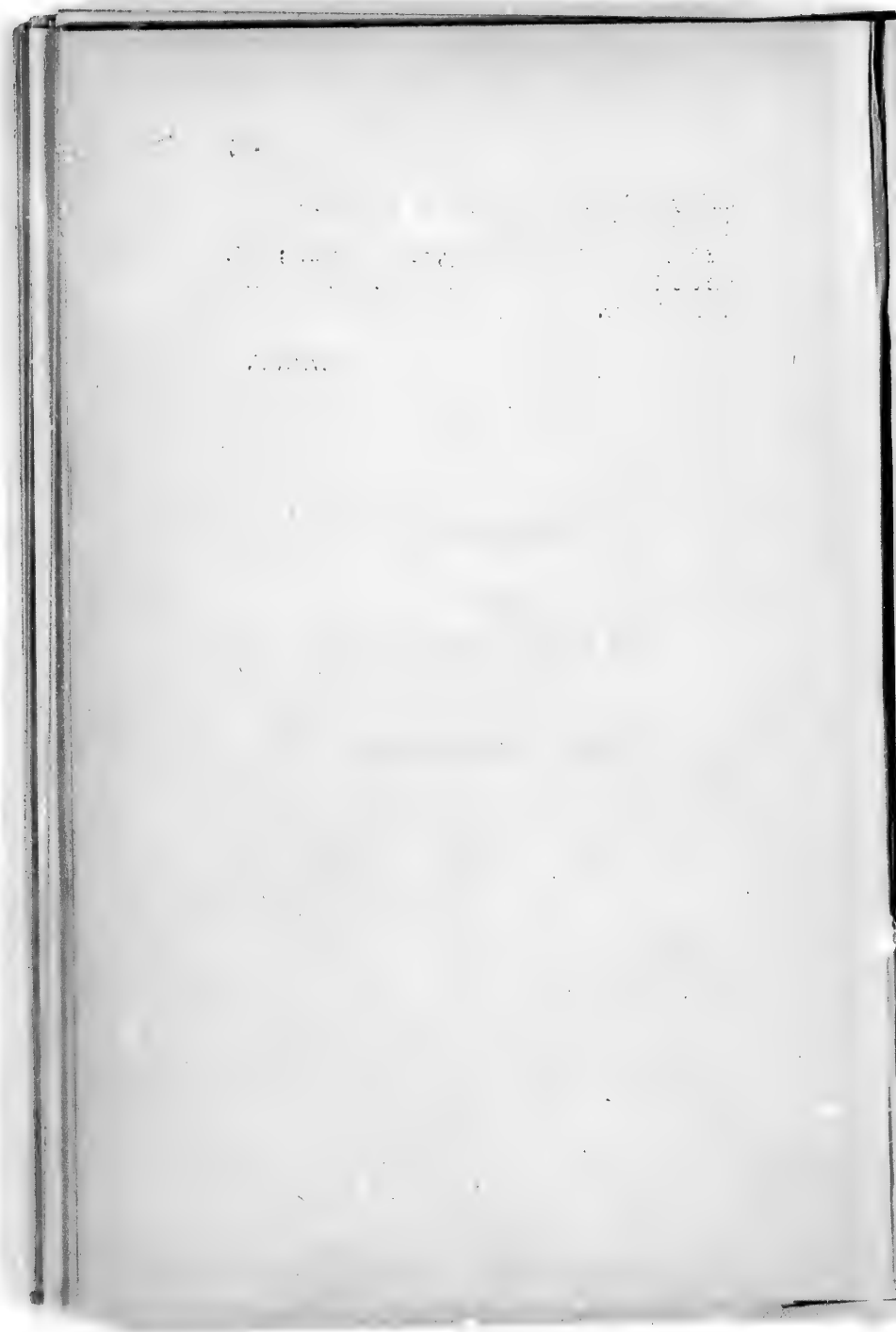
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LETTERS
FROM THE
IRON REGION OF STYRIA,
AND FROM
AUSTRIA AND HUNGARY.

1865.

[The writer of these Letters spent three months in Austria, in the Spring and Summer of 1865, as Private Secretary to one of the English Members of the International Anglo - Austrian Commission, appointed to consider the best means of introducing reforms into the Austrian Custom Tariff.]

LETTERS, &c.

VIENNA, *May 20th*, 1865.

I left Vienna on Tuesday last, the 16th instant, in company with Mr. Bell and Mr. Allhusen, on an expedition to visit the Iron and Coal districts of Styria; as it was considered desirable that Mr. Bell, an iron master himself, should become acquainted with the condition of the chief iron region of Austria. A considerable portion of the statistics contained in the account of the journey is derived from the particulars collected by Mr. Bell during the tour.

We left Vienna by the Express train to Trieste, which runs three times a week in summer, and twice in winter. The train left Vienna at 6 45 a.m., and about 9 a.m. we began to ascend the celebrated Railway Pass of the Semmering.

The scenery, which had been pretty the whole way from Vienna (about 45 miles), grew finer and grander. The mountains increased in height, patches of snow were seen in the clefts, agriculture retired down the valley, leaving verdant slopes, rugged rocks, and precipitous declivities only in view.

At Glocknitz, the station at the foot of the Pass, we had exchanged the ordinary engine for one of great power and ugliness.

The huge machine now began to pant and puff as it hauled the train up the incline, not an incline almost imperceptible to the eye, but one having a rise of 1 in 40, or about twice as steep as Ludgate Hill.

We wound along one side of a narrow valley, at the lower end of which the pretty town of Glocksitz is situated. On the opposite side of the valley an inclined mark could be seen on the face of the mountain. This mark by its regularity, in sometimes displaying a surface of bare strata, now and then crossing a bridge or a viaduct, and by occasionally disappearing altogether (in a tunnel), showed it to be the further course of the ascending railway. The train ran along the verge of an abyss continually increasing in depth; and one could not help speculating with a shudder on the consequences if the train should leave the rails.

After some time, we reached the end of the long narrow valley, and as we crossed to the other side, on a viaduct of two storeys, we had a most beautiful view down the whole length of the valley. The glimpse was certainly one of surpassing beauty.

The fine hills on either side; the mountains in the background; the lower surface of the valley divided into fields, and cultivated; each separate enclosure displaying a different shade of green: the trees of every description clothed in their new May verdure, its freshness not yet toned down by the heats of summer, presented altogether a most lovely spectacle.

As we ascended, the scenery increased in grandeur, the mountains rose higher and higher, and we were surprised that a railway could be constructed in such an alpine region.

We now begin to pass through numerous tunnels and along the edge of giddy precipices, the noise made by the train reverberated among the rocks, and the steam whistle echoed over and over again. We stopped at a station where some little children came with jugs of water—pure mountain spring water—with which to restore the nerves, and refresh the bodies of the

travellers, and all for the moderate charge of one farthing per glass.

Other children presented bouquets of mountain flowers, nicely arranged, for sale.

After leaving this station and ascending some distance further we passed through a tunnel 4,518 feet long, and arrived at Semmering, the summit of the pass.

Semmering consists of only a few houses besides the railway station; it has certainly risen in the world since the establishment of the railway, although it was tolerably high before. It possesses a small inn, at which the tourists, who now often come to enjoy the beautiful scenery of the neighbourhood, can obtain a small amount of accommodation and something to eat.

After leaving the Semmering, the train began to descend an incline almost as steep as the one it had ascended, but the scenery was not to be compared to that just described.

We continued our course to Bruck on the Muhr, a small town 106 miles south of Vienna, where we quitted the train and proceeded by carriage to Leoben, a town 10 miles distant; the centre of the iron district of Styria.

The road passes through a pretty valley, and follows the course of the Muhr, which is one of the chief tributaries of the Drave, into which river it flows near Marburg.

Bruck is a small old fashioned town with an ancient castle and town hall, the latter displayed some rather curious ancient Gothic architecture. The castle was formerly of importance as a Styrian stronghold, but is now only an interesting ruin.

After a pleasant drive of nearly two hours we reached Leoben, a very ordinary looking place. We put up at an old inn, where we found tolerably comfortable quarters, whence I purpose writing to you again before I leave.

VIENNA, *June 1st, 1865.*

I now resume my description of our proceedings after we reached Leoben.

We went in the afternoon to see the Iron works of Mr. Meyer, about two miles distant from the town.

Part of the works were old, having been erected in 1846, since which time they have been much added to and patched.

The operations were mixed together in a somewhat confused manner, and the workmen being employed at several different processes, do not acquire the same amount of skill usually seen in England.

We were surprised to find a considerable amount of Staffordshire pig iron laying in the yard; it seems it is used in the composition of cast steel, for which Mr. Meyer is famous. The cost of this iron varies at Leoben from 126s. to 144s. per ton, the cost in England being from 50s. to 56s. per ton; the freight to Trieste cost from 20s. to 25s. per ton, the duty is 42 kreutzers per cwt. or 16s. 6d. per ton, and the difference is made up by the cost of railway from Trieste to Bruck (257 miles) and of cartage from Bruck to Leoben (10 miles).

These facts afford conclusive proof of the undesirability of maintaining a duty upon foreign pig iron entering Austria, for extra cost in the raw material multiplies itself at every process, and reduces the chance of the finished articles being able to compete with those of foreign makers.

The fuel used at Leoben is brown coal from the coal field of the neighbourhood (5 miles off) and a small amount of coke brought from Funfkirchner in Hungary, 166 miles distant.

The quality of the Iron was considered by Mr. Bell, of Newcastle, to be most excellent, and he thought it a great pity that such excellent material should be used

for such common purposes as making rails, when rails could be sent from England 25 per cent. under the Austrian price. Austria possesses at the same time great advantages for the manufacture of bar iron, in the low rate of wages, and in the abundance of brown coal fit for use at the forge, so that an Austrian bar-maker importing English pig iron and converting it into bars ought to be able to undersell his English competitor; it would, therefore, seem to be very much to the advantage of Austria to import English pig iron duty free, and at the same time to send in exchange some of their excellent Styrian Iron to England to be converted into the higher qualities of steel.

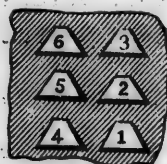
Iron of superior excellence is in great demand in England, at present, and the demand seems likely to increase.

In Sheffield, for instance, 5,000 tons of German spugel iron are used in a year, and the same amount of Swedish iron, all for the manufacture of the best qualities of steel.

After we had seen the iron works we drove out to the Coal mines, part of which also belong to Mr. Meyer.

The deposit of brown coal or lignite is of very considerable extent. It is 8,000 yards long by 3,200 broad, and in the centre it is 48 feet thick, and at the edges 8 feet, the average thickness being 24 feet.

It is worked by a gallery from the hill side, in a rather curious manner; the vein is so large that it admits of six drifts, which are worked one after another as follows:—



The Coal is first extracted from No. 1, which is then filled up with rubbish and No. 2 is worked; when the three first drifts are worked out up to the edge of the seam, they begin at the bottom of the other side. This mode of working is very expen-

sive on account of the great pressure of the superincumbent mass of coal, the weight of which is so great that the battening in the main passages requires partly renewing every three weeks.

The entrance galleries are very large and lofty, being quite 7 feet high and 5 feet broad. The drifts are 5 feet high and 3 feet or 4 feet broad according to the amount of pressure experienced; when the pressure is great the lesser width is adopted.

It is the opinion of many people practically conversant with the working of coal mines that the cost is very much increased by the great size of the seam; but notwithstanding this, the edges of the seam where it is much thinner have been scarcely worked at all.

The coal costs at the pit 7s. 6d. per ton, and the carriage by waggon about three miles costs 2s. 10d. per ton, making the cost at the iron-works in Leoben about 10s. 6d. per ton altogether.

The amount of coal got per day is about 100 tons. It is believed that the average cost per ton could be materially reduced if 1,000 tons per day were worked instead of 100.

After viewing the mine very completely and seeing drawings of the whole field, a mere fraction of which is as yet touched, we returned to Leoben, and passed the night at an old-fashioned inn, with an exceedingly civil landlord.

We left the next morning at 6 a.m. for Forderberg, 12 miles off, in two carriages, one not being considered enough, as we proposed going rather a long way, and the road was hilly.

We had a pleasant drive through a valley of great beauty, the scenery of which increased in grandeur as we approached a range of mountains called the Forderberger Ridge, the most remarkable of which was the Ore

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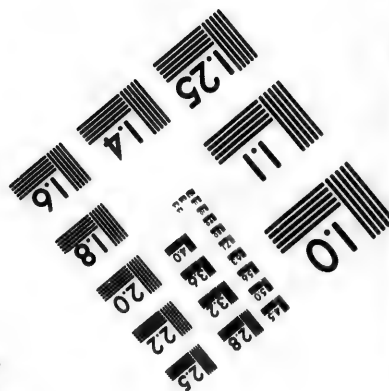
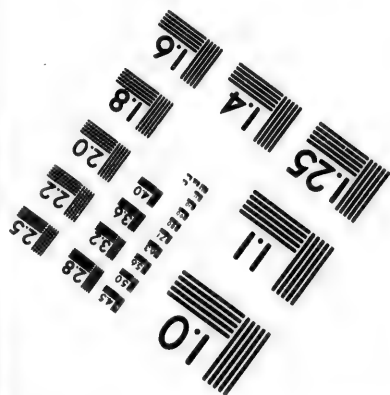
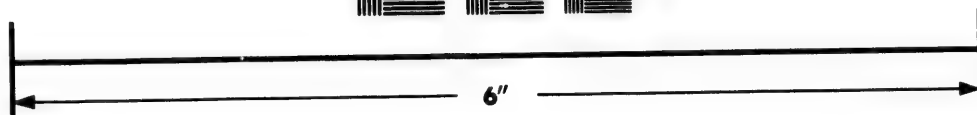
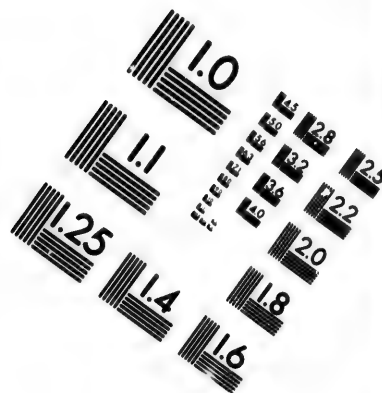
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Mountain, a stupendous mountain composed almost exclusively of ironstone. The valley became at last very narrow and at the point where it ended and the defile between the opposite mountains began, is situated the village of Forderberg, possessing, as we had been told, 14 Blast Furnaces, for the smelting of the ore obtained from the mountain in the neighbourhood.

As we approached the village we looked out for the usual unsightly evidences of a blast furnace, but saw none. At last the coachman stopped before a large handsome, and massive building, having a very capacious central door and a number of windows, a square tower above them, and on the top of that, a smaller tower, the whole giving one very much the idea of an observatory; however, the coachman declared that it was a blast furnace, and seeing a vivid glow within through the large doorway, we concluded that our own impressions were wrong, and that he must be right.

We entered the building, and saw the base of a blast furnace, together with a mass of molten metal which had just flowed out of it. We examined the whole building and found that the square tower was in reality a blast furnace, most magnificently and expensively constructed, with storehouses for charcoal, ore, &c., adjoining. The roasting ovens were built round the upper part of the furnace, and heated by the gas from it.

In the rear was a fine and large blowing machine, driving five hot-air blasts. The whole building was replete with conveniences, but constructed totally regardless of cost.

We were introduced to an ornamental personage, wearing a bright purple waistcoat, one of the under managers. Mr. Bell asked him several technical questions, but he did not seem to possess sufficient knowledge to answer them.

The total produce of pig-iron in Austria is 360,000 tons, of which 75 per cent. of 270,000 tons is of superior quality. The total produce of England is about 4,000,000 of which about 500,000 is of superior quality, or 12 per cent. of the whole.

The chief sources of production are Forderberg in Styria, and Lolling in Carinthea, but they are still very small places, and the furnaces are not worked the whole year round in Forderberg.

They obtain their ore from the Ore Mountain mentioned previously; it is brought in summer by a tramway and thrown into a large warehouse. The ore is brought a distance of from 9 to 7 miles; it is both mined and quarried, but that which is quarried has to be afterwards sorted, so that it is almost as cheap to mine it.

The ore is worked by the masters in common, and after the season is over they meet and determine how much ore, having regard to the price of Iron and the cost of charcoal, each shall receive from the general store.

This is, of course, an absurd system. If there were proper railway communication they would be able to obtain coke as well as charcoal, and to smelt as much as they liked, as they have an unlimited supply of ore in the mountain; the amount is estimated at over 100 millions of tons, so that there is no fear of exhausting it just yet.

After we had seen the largest and best blast furnace we went along the tramway, built for conveying the ore; the tramway is solidly built, but the traffic is very limited. We visited the large magazine where the ore is stored, and then went up the mountain to where the ore was worked; the scenery was beautiful in the extreme, I think finer than that in the neighbourhood of Gmunden, although of much the same character.

We arrived at the Quarries where they were getting

the ore, and saw them drawing up the trucks full of ore by filling the empty trucks with water collected for that purpose from the mountain, so as to counter-balance them; certainly a most efficacious and economical way of effecting their object.

The ore costs at the mine 20 kreutzers per cwt., or 7s. 6d. per ton, and the conveyance, 9 miles over the tramway, 17 kreutzers per cwt., or 6s. 4d. per ton—together 14s. 8d. per ton. The ore contains from 40-45 per cent. of metal, unroasted, and roasted 50-56 per cent. Only about 50,000 tons per year is extracted, and the average cost, as in the case of the coal, is much increased by the small amount obtained, which scarcely furnishes a respectable traffic for the tramway.

But the great difficulty with regard to increasing the production is the scarcity and dearness of fuel with which to smelt the ore.

Some of the charcoal is brought between 40 and 50 miles in carts along country roads, and the average distance is from 18 to 23 miles; the charcoal costs 22s. 6d. to 37s. 6d. per ton.

In the largest furnace they can smelt 8,000 tons of metal, with 5,000 tons of charcoal, which was considered by Mr. Bell a very moderate proportion of fuel.

With railway communication it is calculated that coke from Funfirchner would cost from 17s. to 20s. per ton and 15 cwt. would be required to a ton of metal, the wages averaging 5s. per ton, which was considered also very moderate.

In the Carinthian iron district the ore is cheaper, and the charcoal still dearer than in Styria. In both districts the average rate for both materials and labour is about 2 fl. per cwt., or 72s. per ton, plus 25 per cent. for the cost of maintaining the roads, making 2.50 fl. per cent., or 90s. per ton.

The cost of production is much increased by its smallness, the costliness of the furnaces, bad superintendence, fete days, and the appropriation of the iron to purposes for which a much commoner metal would be more appropriate.

After seeing where they were getting the ore for the furnaces in Forderberg, we descended the opposite side of the mountain, towards Eisenerz, a government establishment; on our way we passed the quarries where they were obtaining the ore from the other side of the same mountain for the government furnaces.

They had all sorts of costly and wasteful apparatus in the shape of tramways and shoots, by which the ore was alternately conveyed, and shot down six times in succession until at last it reached the furnaces in the valley.

The government furnaces were rather more extravagantly constructed than the one previously mentioned, and we were not surprised to hear that they generally entailed an annual loss.

The metal produced was no doubt of first-rate quality, but there was so little of it, and it cost so much beforehand, that there was no margin for profit left.

Leaving the immediate subject of iron for a moment, the scenery of the neighbourhood certainly deserves mention.

As we descended the side of the Ore mountain by a steep zigzag path, we obtained views successively of, in some places, different valleys, each of wonderful beauty.

The sides of the mountain were here covered with forests, the fresh May verdure of which was most beautiful; where the trees and the verdure were absent, and they displayed their rugged sides and weather-beaten surfaces to view, they afforded contrasts seldom to be found in such perfection.

In the first valley, at our feet, lay the village of

Eisenerz—the valleys on either side were void of habitations as far as could be seen—and the second valley in front, which was visible through a defile between the mountains, had on its further side, in the far distance, the ruins of an old castle, the white walls of which stood out strongly in the sunlight.

After dinner at the village, we returned by the road through the pass over the ore mountain, passing through Forderberg, and late in the evening we reached Leoben (which in comparison seemed to lay in a very flat country) after an expedition of great beauty and interest.

The next morning we started again for Bruck, and, taking the train, we proceeded further south to Gratz, 140 miles south from Vienna, where there are some Bessemer steel works belonging to the railway company.

PESTH, 7th June, 1865.

I arrived at the Hungarian Capital yesterday afternoon, and had great difficulty in finding accommodation.

Pesth is very full just now, on account of the visit of the Emperor of Austria.

The Emperor arrived yesterday morning, and was exceedingly well received.

In the afternoon there was a reception at the old Palace of the Kings of Hungary in Buda, from which only three persons of any note were absent.

The Emperor has not visited Pesth for ten years.

A review, which took place early this morning, was spoiled by the rain.

As the Emperor left the review ground, the cheers of the people were most enthusiastic.

Pesth is a modern town: it is regularly built, and is tolerably good looking. The quays on the banks of the Danube, and the buildings along them are very fine.

I will enquire about the wine you speak of at the first opportunity.

PESTH, 9th June, 1865.

I went yesterday, in company with a gentleman to whom I had an introduction, to one of the large tobacco warehouses here.

The Tobacco seemed to be of most excellent quality, and to be handled in a better and more careful manner than that I saw last year at Louisville and St. Louis.

At present there are great difficulties in the way of its cultivation on account of the Government monopoly, but a considerable quantity is produced notwithstanding, and this amount could be indefinitely increased, if the restrictions were removed.

From the tobacco warehouse, I went with the same gentleman to a large steam flour mill situated in Ofen. The mill ground 125 tons of Flour per week. Another mill, twice the size of this one, was in course of construction.

Corn is the chief article of trade here ; the corn comes up the river from Servia in barges, is unloaded here and sent forward by railway or otherwise, as is found most convenient.

The harvest this year is expected to be an average one.

On my way to Pesth, while travelling across the Hungarian plain, its great resemblance to the prairies of the Western States struck me. The resemblance extends also to the climate, soil and productions, Indian corn being very much grown here.

When one sees magnificent corn growing here and in

America with only the rudest cultivation, and producing an amount per acre almost unknown in England, one cannot help thinking that it is a mistake to cultivate wheat in England, for the mild climate and moist atmosphere are far more favourable to the growing of grass and the rearing of cattle than to the cultivation of corn.

I also went, yesterday, to the Agricultural Show, now open here.

The cattle were generally rather ill-shaped and bony, but some of the sheep were very fine, and had most beautiful wool. Mutton is only killed here in the autumn, and even then the flesh has not the firmness of that seen in England.

The best agricultural machines were from Messrs. Clayton and Shuttleworth, of Lincoln, Vienna and Pesth; but some very good ones were also shown by native makers.

The Hungarians are a very interesting people, impulsive no doubt, but more capable of rapid progress, I should think, than the Germans, possessing none of the inherent slowness of the latter.

The Emperor continues to be greeted most enthusiastically whenever and wherever he is seen.

The Emperor went yesterday evening, first to the National Theatre, where he was greeted by the populace; and afterwards, to the great Hall in Pesth called The Ridout, where he was again greeted by the upper classes. Altogether, I should say that the Emperor's visit has been a great success, and it seems to have produced a very good effect.

A remark of the Emperor's to Count Esterhazy a few days ago in Vienna is worthy of notice; speaking of Hungary, the Emperor said "that he and the other Hungarian nobles must learn to be citizens, instead of the lords of Hungary."

It is said that the Emperor will repeat his visit before long; probably to be crowned. He has not yet been crowned or even acknowledged King of Hungary, but at present there seems every probability of an early solution of the Hungarian question.

Hungary is making progress, and Pesth is growing every day. The last census gave it a population of 120,000 souls, but it has probably now about 170,000. It has received a large accession of Jews, who have quitted Poland since the late insurrection.

Mr. Halperson, one of the firm of Stein, Hirschel & Co., to whom I had an introduction, went with me this morning to the largest wine merchants here, Messrs. A. Jalics and Co., with whom he has some business connection.

We went through the cellars, which are very extensive; indeed one could easily lose one's self in them.

They have a system of signals so as to be able to find any one who happens to be in the cellar when required.

From among a large selection of wine recommended by Mr. Jalics, junior, as appropriate for England, we chose the following, from which you can make your own selection:—

WHITE		RED	
	fl. per doz.		fl. per doz.
Hungarian Chablis, nice		Hungarian Claret, very	
light wine	5½	nice	5½
Vallanyi Muscat, rather		Carlowitz, still better . .	6½
better, Moselle flavour	6½	Menesi, very good . .	8
Emeleki, very good		Ofner, Adelberg . .	12
indeed	10	Ofner, Eigenbau . .	
Shomlauer, very fine . .	8	both very superior.	
Szamorodnyi, a kind of		The florin is equal to say, 2s.	
Tokay	12		

All these wines can be had in bottle as well as cask.

Mr. Jalica, junior, has been in England, and since his return they have bottled some of the sorts most appropriate to the English climate. They seem very desirous of establishing a connection with England.

The casks usually contain four cimers, or 46 English gallons. The freight to London would average about 3s. per dozen.

I shall hope to hear from you soon in return to say which you have selected.

TRIESTE, 18th June, 1865.

As you have determined to have the wine in casks, I think it would be better to send some of the higher qualities,

I have a cask price list with me, and I find that red Menesi (1857) is perhaps the best wine in proportion to its cost, a cask of 46 gallons would be 85 florins.

For white wine, a cask of 1857 Shomlauer, costing 95 florins, would be very good.

As you wish for a third cask I think you had better have a cask of the best red wine, either Ofner Adelberg, or Ofner Eigenbau, the latter would cost 165 florins, but as it obtained a prize at the 1862 Exhibition in London, and was said to excel some of the Chateau Lafitte, I think it would be a very safe purchase.

Please let me know as soon as possible so that I may transmit the order to Pesth.

FIUME, 12th July, 1865.

I arrived here yesterday about mid-day from Pesth, *via* Vienna and St. Peters.

Fiume is rather a nice place, it is situated on a deep bay of the Adriatic formed by the peninsula of Istria.

The port is good and commodious, and there is plenty of room for extension in the town ; the only thing that is required is a railway to Hungary.

The latest news with regard to this project is very favourable, the Southern Railway Company having withdrawn their opposition.

I am going with Mr. Smith to-morrow to see the various industrial works in the neighbourhood, foremost among which is his Paper mill.

The view across the bay towards Istria is very pretty.

I am very delighted to see the sea again.

FIUME, 14th July, 1865.

Since I wrote to you on the 12th instant I have visited several places of interest. Foremost among them the Paper Mills of Messrs. Smith & Monier of this town.

The establishment is very extensive, it consists of an old and a new mill.

They are both situated in the rocky gorge through which the Fuimana river flows; they are worked by water power, but there is only full water power during six months of the year, half power during three months and very little at all during the remaining three months.

The water is conveyed to the older or upper mill by means of a canal 300 feet long, cut through the solid rock; a shorter canal, also in the rock, conveys the water from the old to the new mill.

Previous to 1852 the tunnels through the rock did not exist, but in that year a flood carried away the existing hydraulic canal, which, on account of the narrowness of the gorge and the small amount of space at the banks, crossed the river several times on bridges; all these bridges were destroyed by the flood, and the mill stopped for six months.

At present they have steam power to assist or take the place of the water power whenever necessary.

The buildings of the old mill are irregular, having been constructed as necessity required.

In one portion of the old mill, a machine for the animal sizing of paper is being erected, at a cost of over £2,000. It occupies a length of 130 feet; the paper to be made by it is intended for the English market.

The new mill is a regular building, specially con-

structed ; in it each process is properly provided for and conveniently arranged.

Each mill contains the ordinary boiling, bleaching, stewing, grinding, squeezing and other machinery appertaining to the preparation of pulp for the manufacture of paper.

The machines for making the fine varieties of paper are in the old mill, and those for making packing, and other common sorts of paper, in the new.

The paper is largely exported to England and to the Levant.

The stock of rags on the premises amounted to 16,000 cwts., and the stock of paper in Fiume, and at the depots in Trieste and London, was worth nearly £20,000.

The Coal used for the steam engines, is of good quality, but dear. The mines are not far distant, but they belong to Baron Rothschild who has a monopoly of them, and who fixes the price just below that of Newcastle coal.

I afterwards went with Mr. Smith, to whom I am much indebted for all I saw in Fiume and its neighbourhood, over the Chemical works and over the joint-stock Iron works.

The chemical works were first intended for the manufacture of soda, but they did not succeed on account of the high price of salt and coal, the first caused by the Government monopoly, and the second by that of Baron Rothschild.

They now manufacture sulphuric acid and alum. The latter is prepared by the patent process and then refined twice. It is used in large quantities by the paper mills.

I think it would fare badly with the concern if it were not for the consumption of the paper mill, as there is scarcely any outside demand.

The iron works are situated about a mile from Fiume. The works are well placed and conveniently arranged,

but at present they have not much to do. They are making, however, a large marine engine of 800-horse power for one of the new Austrian iron-clad frigates.

The situation is peculiarly adapted for iron ship building, and the proprietors hope to do something in that line when Fiume gets a railway.

The railway will have to cross the backbone of the Adriatic, in order to enter the Hungarian plain.

The mountains composing this chain run parallel, and very close to the shores of the Adriatic, and the constituent rock is exceedingly hard.

However I believe a very satisfactory line has been traced out by the Government engineers, and it is to be hoped that the project will be carried out as soon as possible.

Besides the works just described, Fiume has three flour mills, not all now in operation; a tobacco factory belonging to the Government, a rope walk, and a chocolate mill, which for a town of 15,000 inhabitants is not bad.

I expect to leave for Trieste to-morrow by the diligence.

FIUME, 15th June, 1865.

I can now give you some account of my visit to the Coal mines at Wolfsegg.

I left Vienna in company with Dr. Neumann, and went by the night train on the Southern Railway to Swanenstadt, a station 140 miles from Vienna, where we arrived at 6 a.m. next morning. A carriage had been previously ordered, in which we immediately proceeded to Wolfsegg, a small mining village on the northern side of the railway, and about eight miles distant.

The whole neighbourhood is supposed to contain coal, but the chief deposit is in the Wolfsegg mountain.

The coal is found in two seams: the lower one from 4 to 8 feet thick, and the upper one from 4 to 6 feet thick. The intervening strata consists of a few inches of clay, and then sand, having together a thickness varying from 3 to 5 feet.

The coal, or rather lignite, has unfortunately only a limited heating power in proportion to its bulk. Sixteen cwt. of it are equal to a square fathom of wood 30 inches long, or, more accurately, to 90 cubic feet of soft wood. The cost in Vienna is 46 kreutzers, or 11d. per cwt., or 16s. 6d. per ton. The cost of Leoben coal in Vienna, brought about the same distance, is 92 kreutzers, or 1s. 10d. per cwt., or 33s. per ton. Its burning power is one quarter greater than that of Wolfsegg coal, 12 cwt. being equal to 20 cubic feet of wood.

A third kind of Coal is also used in Vienna, viz., that from Ostrau, in Silesia. This is a black, or bituminous coal: it costs 86 kreutzers, or 1s. 9d. per cwt., or about 31s. 6d. per ton; and 9½ cwt. of it are equal to 90 cubic feet of wood.

The Wolfsegg Coal has, however, one very great advantage, namely, that it contains no sulphur, so that boilers are not injured by it. This is of considerable consequence when it is employed for locomotives. The Western Railway uses it, and consumes the principal part of what is raised. The total annual produce is 5,000,000 cwts., or 280,000 tons, of which the Western Railway Company take the greatest part; some little, however, being used in the neighbourhood, and also a little in Vienna, chiefly for manufacturing purposes; it yields too much ash to be convenient for domestic use.

We breakfasted in the village and then drove to the mines. They are worked very easily by a gallery entered from the side of the hill. The coal is of such consistency that the workings require very little propping.

The two seams of coal follow the dip of the hill to a certain extent. The gallery is driven right through the hill from daylight to daylight.

A gallery is chiefly in the upper coal seam; but as it is a dead level, it is sometimes rather below the upper seam, and at one place touches upon the lower one.

A gallery has also been driven through the lower seam to about half the length of the upper gallery. This is merely intended to drain the workings, as the lower seam has not yet been worked. Shafts and pipes connect the lower with the upper gallery, and through these the water flows off with the greatest facility.

Side drifts are driven from the central gallery, and when the edge of the seam is reached, the coal is gradually worked out and the roof allowed to fall in. In some places, the depth below the surface of the hill is so small that the effects of abstracting a portion of the inside of the hill are visible outside, in the irregularities and fissures with which some parts of the side abound.

The coal is worked from both sides of the hill, at two

places a considerable distance apart, and is conveyed by separate tramways to the railway, one of which joins it at Breitenschutzing, 137 miles from Vienna, and the other meets it at Arran, a station nine miles further off.

The laden coal-waggon descends both tramways by their own gravity, and the empty waggon is drawn up again by horse-power.

On the arrival of the coal at the two places just mentioned, it is stacked and allowed to remain some time. It loses a portion of its water, and decreases as much as from 8 to 12 per cent. in weight, but its heating power is increased.

The cost of the coal delivered on the railway is about 17 or 18 kreutzers (4d or 4½d.) per cwt., or 6s. or 6s. 6d. per ton.

I reached Arran in the evening in time for the night train to Vienna, which arrived at Vienna early the following morning, and after a short stoppage went on again to Pesth.

TRIESTE, 17th June, 1865.

I arrived here early this morning by the diligence from Fiume. The journey of about 60 miles was performed in 11 hours.

The jolting was very considerable, and the amount of space allowed very small; there were four people in the carriage, two of them rather stout, besides several bundles and band boxes. We were jolted along and against one another during the whole night; however, shortly after daylight we obtained a view of the sea in the distance, and our hopes of soon arriving at Trieste were much increased thereby. As we descended towards Trieste we passed a string of cattle teams at least half a mile long. They were conveying wood chiefly for exportation to the Levant.

Trieste is beautifully situated on a fine bay; the harbour is tolerably commodious, and is kept in very good order by the authorities.

The steamers belonging to the Austrian Lloyd lay at one of the central jetties.

There is a weekly line of 2,000-ton steamers to Alexandria, and another to Constantinople, besides other lines of small steamers running daily or several times a week to Venice, Fiume, Pola, &c., and other places on the Adriatic coast.

The company have a magnificent arsenal on the bay of Mujio, a bay adjoining that of Trieste, which I hope to visit during my stay here.

On a promontory projecting from the north western shore of the bay of Trieste, about seven miles distant, can be seen Miramar, the marine residence of the Emperor of Mexico.

It looks very well from a distance, and it is said that it improves on a nearer view.

I will write again before I leave here.

TRIESTE, 21st June, 1865.

Since I wrote to you on the 17th, I have visited the arsenal belonging to the Austrian Lloyd, and also Miramar.

The arsenal is a very large establishment, having a frontage of about a mile on the bay of Mudjio.

There are three graving docks, one of them long enough to take two vessels at once. A considerable amount of dock accommodation is necessary, as vessels very quickly become foul and require to be scraped very often.

There is also a jetty with shears and other necessary apparatus for hoisting boilers and heavy machinery.

There is a long row of very fine workshops for making everything that may be wanted.

The fitting and erecting shops are very large. The smithy may be styled a blacksmith's palace; indeed expense in the construction does not seem to have been at all considered.

The workshops seemed all to be fully employed, as several of the larger vessels belonging to the company are being lengthened, and numerous others are under repairs.

Their fleet counts altogether 68 steamers.

The company gained last year a burden of 13,000 tons by lengthening some of their best vessels.

They have just built a large iron steamer of about 2,000 tons called the "Austria."

It is the first of that size which they have as yet built themselves.

They have also three Clyde-built iron steamers of

about the same tonnage; one of them, which I saw leave yesterday morning for Egypt, was a very beautiful vessel and sat very gracefully on the water.

I cannot say that the new steamer constructed by themselves is as good looking, or that she floats as gracefully; I should also doubt whether she will equal the others in speed, as her lines do not seem to be nearly so fine. She is however represented to be very strongly built, her bulkheads come up to her upper deck, an arrangement not generally considered necessary, and which will no doubt increase her stiffness but will be rather inconvenient.

Houses, or rather barracks, for the workpeople have been built for them in the neighbourhood.

Altogether it is a most complete establishment, no doubt necessary to the company considering the state of things here, because there is no other yard where they could repair their vessels so expeditiously; but the arsenal was no doubt very costly to construct, and I should think to keep up.

The arsenal is about one mile and a-half from Trieste. The bay of Mujio affords most excellent anchorage for ships, the vessels of war always lay there. The Government has a yard almost adjoining that of Lloyd's, but not nearly so extensive.

A pretty avenue close to the shore leads to both; this avenue is a favorite drive of the people of Trieste.

To go by water from the harbour of Trieste to the Bay of Mujio, it is necessary to round the end of the break-water, which protects the harbour from the swell of the Adriatic.

I went by water to Miramar; it is certainly a very beautiful place. It is situated on a rocky promontory, and close to the water's edge. The building is not large, it is constructed in the castellated style, but the architecture presents nothing very striking.

There is a little breakwater built from the point of the promontory which forms a terrace, and at the same time encloses a small harbour for a yacht and a few boats.

The mountain rises steeply behind the house, and the garden is therefore laid out in terraces rising one above the other, which produce a very pretty effect, the plants contrasting well with the rocks amongst which they are dispersed.

The scenery on the bay is pretty. About half way to Miramar there is a very good view of the bay and town of Trieste with the hill behind it, on the N.W. the hills rise sharply from the side of the water; the railway to Vienna passes along these hills, ascending a rather steep incline until it reaches its highest point some distance beyond Miramar.

Trieste itself is rather a handsome town; the ground upon which the present quays stand has been recovered from the sea. The buildings facing the sea are fine. The new Exchange is a very commodious building, and much thronged during business hours. It is said that trade is dull here at present, but there still seems to be a good deal doing.

I propose leaving for Vienna to-morrow, and you will most probably next hear from me after I arrive in Prague.

GOtha, 2nd July, 1865.

I have not yet told you anything, either about Prague, or the Coal districts of Bohemia.

Except Nuremberg, Prague is the most old fashioned town I have ever seen. It is situated on the Moldau, a tributary of the Elbe, but it is above the navigable portion of that river. It possesses some iron works and a few other factories, but it is of more historical interest than present commercial importance.

The old castle with the cathedral in the middle is a very interesting and curious old place.

A very ancient Jewish synagogue and burying ground on the Jewish quarter are especially remarkable, the graveyard is at least 23 feet higher than it was originally; the increase of height was caused by the practice, which the Jews had of burying the bodies by placing them on the ground and covering them with earth, this process repeated over a limited area a great number of times naturally raises the surface of the burying, and so multiplies the gravestones that there is scarcely space to place any more.

Wallenstein's Palace, and the Old Town Hall, with a very ancient chapel, and a council chamber still preserving its mediæval decorations, are both historically curious. The old town gates remain standing, and the whole place has a great air of bygone times.

The neighbourhood of Prague abounds in pretty

scenery; its position was formerly one very capable of defence, and even some few defensive works are still kept up on the northern side

From Prague I went to Aussig, a town situated on the Elbe, very near to the head of the navigation on that river.

The railway follows the course of the Elbe, which flows through some very narrow and confined gorges during its passage through the chain of mountains on the borders of Bohemia, to enter into the great and broad valley in which it continues till it reaches the sea. The upper course of the Elbe presents a great contrast to the lower. As far as Pirna, in Saxony, the Elbe flows through a very confined valley, but from Pirna to the sea its course is through a vast and almost level plain. The scenery on its upper course is very pretty, and between Bodenbach and Pirna it is very fine. This part of the country is called the Saxon Switzerland. It abounds in curious formations of sandstone rock, which rise abruptly from the surface of the country, often to a great elevation (from 200 to 600 feet). One of the largest of these, called Kœnigstein, is 600 feet high; it has been a fortress for centuries. It was formerly considered the key of Saxony; it boasts of being the only fortress which ever baffled Napoleon, although I imagine that against the increased range of modern artillery it is scarcely impregnable.

However, to return to Aussig. A branch railway runs from Aussig to Toplitz, a distance of about 12 miles. It passes through a very rich Coal region. The coal lies in a basin similar to that of Leoden, but of much greater extent. It is of very good quality, 12 cwt. being equal to a square fathom of wood 30 inches in length. Its price is 13 kreutzers, or 3d. per cwt., or 5s. per ton at Aussig.

The district produces yearly 700,000 tons.

I visited one of the mines, from which 75,000 tons are drawn yearly.

The coal is drawn from shafts about 120 feet deep, each mine having an upcast and a downcast shaft, and being ventilated in the usual manner. In the mine I saw 150 workmen were employed, at wages rather above the average of those in Styria. The coal is of such consistency that very little wood is required to support the roof of the workings.

They have such an abundance of room in the mine that they get the coal and then pile it up in readiness to be drawn out when required. The mine I speak of supplied a large sugar mill in the neighbourhood, which was a considerable but not a regular consumer, so they kept the coal in the manner described until it was wanted.

There are numerous factories in the neighbourhood of various kinds, Iron, Sugar, Chemicals, &c., all attracted by the abundance and cheapness of coal.

From the very favourable situation of Aussig there is every probability of its rising into a place of considerable importance.

It already possesses steam communication with Dresden several times a day, besides the railway. The branch railway is to be extended from Toplitz to Hof, where it will join the general system of German Railways.

There is also a project for a railway eastward to Reichenberg, where it would join the railway system of Eastern Bohemia.

A harbour is being constructed in which vessels may winter safely from the ice, and the navigation of the Elbe is being improved.

Bodenbach, 10 miles below Aussig, is the frontier of Saxony, and the commencement of the Saxon Switzerland.

There are numerous quarries on the banks of the river where building stone is obtained, prepared on the spot, and sent by water to Dresden and other places.

This portion of the course of the Elbe is now very much visited by tourists, on account of its beautiful and remarkable scenery. The sandstone formations previously mentioned rise perpendicularly above the ordinary surface; their summits are generally wooded, and the contrast between the bare rock and the foliage is very beautiful.

Bodenbach and Konigstein are favourite places of summer resort of the Dresdeners.

From Aussig I came through Dresden and Liepzig hither, and from here I intend to go back to England, so that I do not suppose I shall find anything more to describe to you, as you have traversed the route.

W. T. N.

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